

# **Exhibit 34**



**FEDME** Hvordan markedsfører man en behandling for en sygdom, som mange læger ikke anerkender?

**GLP-1**  
Lille protein,  
stort potentiale

**GLOBAL EFTERSPØRGSEL**  
udløser store  
produktionsinvesteringer



# novo nordisk

## ÅRSSKRIFT 2015



**HVORFOR FÅR  
SÅ MANGE  
MENNESKER I  
BYER DIABETES?**



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### OM DETTE ÅRSSKRIFT OG NOVO NORDISKS ÅRSRAPPORT 2015

Dette årsskrift er en dansk udgave af ledelsesberetningen, som er indeholdt i årsrapporten for 2015 (Novo Nordisk Annual Report 2015), samt uddrag af koncernregnskabet med de finansielle, sociale og miljømæssige resultater for året. Novo Nordisks årsrapport udarbejdes udelukkende på engelsk. Årsskriftet er udarbejdet i henhold til årsregnskabslovens § 149, stk. 2, i tilfælde af uoverensstemmelse mellem den danske og den engelske version er den engelske gældende. Læsere, der ønsker at se det fulde koncernregnskab med anvendt regnskabspraksis og noter, moderselskabsregnskab samt ledelses- og revisionspåtegninger, henvises til årsrapporten, der er tilgængelig på hjemmesiden [novonordisk.com/annualreport](http://novonordisk.com/annualreport). Årsrapporten fremlægges til godkendelse på generalforsamlingen den 18. marts 2016, hvorefter den vil være tilgængelig i Erhvervsstyrelsen.



# ET GODT ÅR

## BREV FRA BESTYRELSESFORMANDEN

2015 var et godt år for Novo Nordisk. Det er bestyrelsens vurdering, når vi ser tilbage på året, der gik, og jeg håber, de fleste vil være enige med os.

I en vanskelig og omskiftelig tid for lægemiddelindustrien indfriede Novo Nordisk de forventninger til både salgs- og indtjeningsvækst, som vi havde sat ved årets begyndelse. Lige så vigtige er de store fremskridt i vores pipeline af nye og kommende produkter, som lover godt for fremtiden.

På de følgende sider gennemgår vores adm. direktør, Lars Rebien Sørensen, nogle af de vigtigste fremskridt og resultater i 2015, herunder lanceringen af Saxenda® til fedmebehandling, rækken af positive fase 2- og 3-data for semaglutid i både injicerbar og oral formulering til type 2-diabetes og, naturligvis, den længe ventede godkendelse af Tresiba® i USA.

Disse fremskridt er resultatet af en meget robust, langsigtet strategi og fremragende eksekvering i hele Novo Nordisk-organisationen. Hvert år bruger vi meget tid ved bestyrelsesmøder og møder med direktionen på at gennemgå denne strategi. Vi udfordrer forudsætninger og bringer nye perspektiver ind i debatten for at sikre os, at virksomhedens strategiske prioriteter er de rigtige, og at organisationen også har de nødvendige kompetencer til at gennemføre dem.

De, der har fulgt Novo Nordisk i nogle år, vil bemærke, at vi ikke har ændret væsentligt på strategien i 2015, som det fremgår af artiklen på [side 16–17](#). Det betyder, at virksomheden vil fastholde sit skarpe fokus på fire sygdomsområder: diabetes, fedme, hæmofili og vækstforstyrrelser. Mange af vores drøftelser i årets løb har drejet sig om, hvordan vi bedst kan sikre, at Novo Nordisk vedbliver med at skabe innovation indenfor de fire områder, således at vi også i de kommende årtier kan levere nye og bedre lægemidler til mennesker med disse alvorlige kroniske sygdomme. Det vil kræve yderligere udvidelse af vores europæiske, amerikanske og kinesiske forskningsorganisationer, og at vi endnu mere aktivt indgår partnerskaber med biotekselskaber og universiteter, der har viden og teknologi, der komplementerer vores egen.

En af de vigtigste opgaver for en bestyrelse er at sikre, at virksomheden har det rette lederskab, og at der findes solide successionsplaner for topledelsen. I april offentliggjorde vi en række væsentlige ændringer i direktionen, idet vi løftede cheferne for vores kommercielle aktiviteter i USA, Europa og International Operations samt Product Supply op i direktionen. Derudover fik Jakob Riis, koncerndirektør med ansvar for Marketing, Medical Affairs og Stakeholder Engagement, øget sit ansvarsområde til også at omfatte Kina, Japan, Korea, Australasien og Canada. Bestyrelsen besluttede endvidere, at adm. direktør Lars Rebien Sørensen skulle forblive i sin rolle, indtil han nærmer sig udløbet af sin kontrakt i 2019.

Disse ændringer styrker bestyrelsens indsigt i Novo Nordisks internationale forretningsaktiviteter i en tid, hvor virksomheden forbereder sig på den verdensomspændende lancering af en række vigtige produkter og tager hul på det mest omfattende investeringsprogram i nye produktionsanlæg i dens historie. Samtidig understøtter ændringerne den fortsatte udvikling af vores talentpulje til nøgleposter i ledelsen.

Ændringerne medførte, at Kåre Schultz, viceadm. direktør med ansvar for Operations, besluttede at fortsætte sin professionelle karriere udenfor Novo Nordisk. Jeg ønsker Kåre alt godt fremover og takker ham for alt det, han har opnået i Novo Nordisk gennem mange år. Lars

Rebien Sørensen har nu rollen som formand for Operations Committee med Lars Fruergaard Jørgensen, koncerndirektør med ansvar for Corporate Development, som næstformand.

På baggrund af Novo Nordisks solide resultater i 2015 vil bestyrelsen på den kommende generalforsamling foreslå en 28% stigning i udbyttebetalingen til 6,40 kr. pr. aktie. Bestyrelsen har endvidere besluttet at iværksætte et nyt aktietilbagekøbsprogram på op til 14 mia. kr., som starter i februar 2016, og forventer at påbegynde udbetaling af halvårligt udbytte i august 2016.

Med de finansielle resultater for 2015 har vi nået de langsigtede finansielle mål, som vi senest reviderede i januar 2013. På baggrund af de seneste års væsentlige stigninger i overskudsgraden og behovet for at investere i fastholdelse af salgsvæksten er yderligere forbedringer i overskudsgraden ikke en prioritet for de kommende år. I lyset heraf har vi fastsat det langsigtede mål for vækst i resultat af primær drift til 10%, hvilket understreger vores tillid til virksomhedens vækstpotentiale.

På vegne af bestyrelsen vil jeg gerne udtrykke min anerkendelse af det lederskab, Lars Rebien Sørensen og hans kolleger i ledelsen har udvist, og af den store indsats og det engagement, der kendetegner hele Novo Nordisk-organisationen.



Göran Ando  
Bestyrelsesformand



# DET DREJER SIG OM INNOVATION

## BREV FRA DEN ADMINISTRERENDE DIREKTØR

I mit brev i sidste års rapport forudså jeg, at 2015 ville blive et af de mest spændende og udfordrende år i Novo Nordisks 92-årige historie. Og det har det så sandelig også været. Det skulle vise sig, at der var meget at glæde sig over, og vi klarede de fleste udfordringer i fin stil.

Jeg vender tilbage til udfordringerne senere. Lad os starte med det allermest spændende, nemlig udviklingen i vores produktpipeline. Sagen er nemlig, at hvis der ikke er fremdrift i vores pipeline, hvis vi ikke opfinder og udvikler nye, innovative produkter til mennesker med diabetes og andre alvorlige kroniske sygdomme, så får vi ikke succes på den lange bane. Så lad os se på de vigtigste resultater fra vores pipeline i 2015:

- Tresiba® (insulin degludec) – vores nye langtidsvirkende insulin – blev godkendt i USA i september og lanceret i januar 2016 til behandling af type 1- og type 2-diabetes.
- Xultophy® – en kombination af insulin degludec og liraglutid til type 2-diabetes – blev lanceret i de første europæiske lande, og vi indsendte godkendelsesansøgning i USA.
- Efter succesrig afslutning på fase 3a-studierne indsendte vi ansøgning om godkendelse af hurtigerevirkende insulin aspart i både EU og USA til blodsukkerregulering omkring måltider for både type 1- og type 2-diabetespatienter.
- Injicerbar semaglutid – en GLP-1-analog til injektion én gang dagligt til behandling af type 2-diabetes – viste signifikant bedre effekt end de produkter, den blev sammenlignet med i fire fase 3-studier i løbet af året.
- En formulering af semaglutid til indtagelse i tabletform én gang dagligt viste meget opmuntrende resultater i et fase 2-studie (proof-of-concept), og vi besluttede derefter at lade produktet gå videre til fase 3-udvikling.
- Vi lancerede Saxenda® (liraglutid 3 mg) i USA og på de første markeder udenfor USA. Saxenda® er vores første produkt til behandling af fedme, et uudviklet marked på trods af den enorme og voksende byrde, som fedme udgør i hele verden.
- Vi lancerede NovoEight® i USA til mennesker med hæmofili A, og i januar 2016 indsendte vi ansøgning om godkendelse i Europa af vores langtidsvirkende faktor IX (nonacog beta pegol) til behandling af hæmofili B. Vi forventer at kunne indsende ansøgning i USA i første halvår af 2016.

Med det antal projekter, vi p.t. har i vores pipeline, kunne man godt forvente sig et par dårlige nyheder. Men vi var så privilegerede, at vi kun oplevede én større skuffelse i 2015: Resultaterne af fase 3-studier viste, at liraglutid (Victoza®) som tillægsbehandling til insulin ganske vist opfyldte det primære mål om at forbedre blodsukkerreguleringen for mennesker med type 1-diabetes, men desværre uden fordel i forhold til hypoglykæmi, som er påvist indenfor type 2-diabetes. Vi besluttede derfor ikke at indsende ansøgning om en indikationsudvidelse for Victoza® til behandling af type 1-diabetes.

Det er vores forventning, at der fortsat vil være en stigende efterspørgsel efter vores produkter i mange år fremover. Derfor traf vi i

2015 beslutning om den største udvidelse af vores produktionskapacitet til diabetes-, fedme- og hæmofiliprodukter nogensinde. Vi vil bl.a. investere knap 2 mia. dollars i et nyt anlæg i Clayton i North Carolina, USA, som skal producere aktive lægemiddelstoffer til både oral semaglutid og en række af Novo Nordisks nuværende og kommende diabetesprodukter.

Udvikling og fremstilling af sådanne produkter vil altid have højeste prioritet for os, men vores indsats for at ændre diabetes rækker længere end lægemidler. I 2014 lancerede vi Cities Changing Diabetes, et partnerskabsprogram med det formål at afdække og tackle de grundlæggende årsager til type 2-diabetes i storbyer verden over. Jeg var meget glad for at se de fremskridt, der allerede er gjort, på det første Cities Changing Diabetes-topmøde, som vi var værter for i København i november 2015.

Da jeg i starten af mit brev skrev, at 2015 har været et udfordrende år, tænkte jeg især på de udfordringer, der ligger i at opnå markedsadgang for vores nye produkter.

I 2015 var vi involveret i stadig hårdere forhandlinger med betalere i USA om at få vores produkter med på deres lister over tilskudsberettigede lægemidler. I Europa, Kina, Japan og mange andre lande oplever vi fortsat kraftigt prispres og tilskudsrestriktioner for nye produkter. I ét tilfælde, nemlig Tresiba® i Tyskland, så vi os nødsaget til at træffe den svære beslutning at indstille distributionen af produktet efter det negative udfald af prisforhandlingerne med Tysklands nationale sammenslutning af lovpligtige sygekasser. Vi blev tilbudt en pris, der lå på niveau med ordinær human insulin, et produkt, der blev lanceret i 1980'erne. Hvis vi accepterede en sådan pris, ville vi underminere vores evne til at forske i og udvikle innovative medicinske produkter til mennesker med diabetes.

Dette er et ekstremt tilfælde, men det er et godt eksempel på, hvad der kunne gå hen og blive en uholdbar fremtid for forskningsbaserede lægemiddelvirksomheder, hvis betalere og producenter ikke kan blive enige om fastsættelsen af værdien af et lægemiddel. Der er ingen tvivl om, at vi i Novo Nordisk, og i industrien som helhed, bliver nødt til at blive bedre til at påvise den værdi, vores nye produkter tilfører. Det er i lyset heraf, vores nye partnerskab med IBM Watson Health skal ses. Partnerskabet, som blev offentliggjort i december, skal undersøge mulighederne for at opnå bedre diabetesbehandling gennem indsigt fra 'real-time, real-world' data fra brug af Novo Nordisks diabeteslægemidler og -doseringsystemer.

På trods af udfordringerne med at sikre markedsadgang sluttede vi året med en vækst i salget på 8% og i resultat af primær drift på 21%, begge opgjort i lokale valutaer. Salgsvæksten var primært drevet af Victoza®, især som følge af den høje vækst på GLP-1-markedet, men også andre produkter klarede sig godt, herunder Levemir®, NovoRapid®, Tresiba® og vores humane væksthormon, Norditropin®.

Den nye generation af insulin tegnede sig for 10% af salgsvæksten opgjort i lokale valutaer, og Tresiba® klarer sig fortsat godt på alle de markeder, hvor det konkurrerer på lige fod med andre insulinprodukter med hensyn til tilskudsstatus. Tresiba® blev lanceret i Japan som det første land i februar 2013, og i slutningen af 2015 havde det erobret over 33% af segmentet for langtidsvirkende insulin (basalinsulin) i Japan, opgjort i værdi.



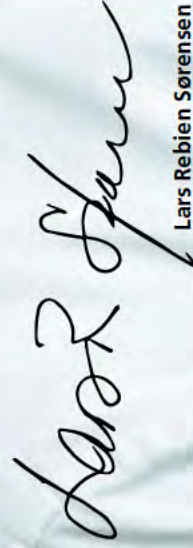
Fra et regionalt perspektiv, så tegnede Nordamerika sig for 62% af salgsvæksten, efterfulgt af International Operations og Region Kina. Det er også i disse tre regioner, vi forventer den største vækst i de kommende år, selvom vi har måttet reducere vores kortsigtede vækstprognoser for Kina som følge af lavere økonomisk vækst, prisreformer og øget konkurrence fra både lokale og globale konkurrenter.

Nogle af de emner, jeg har nævnt i mit brev, er uddybet i resultatgenngangen, der starter på **side 6**, samt i efterfølgende artikler i dette årsskrift. Jeg håber, at de vil give en god fornemmelse af, hvorfor jeg på trods af lægemiddelindustriens udfordringer fastholder min optimisme med hensyn til Novo Nordisks fremtid. Der er et reelt behov for medicinsk behandling og bedre lægemidler, især i mange vækstøkonomier. Vi vil gøre vores bedste for at dække disse behov og samtidig skabe værdi for vores aktionærer og for samfundet som helhed gennem den viden, vi genererer, de skatter, vi betaler, og de job, vi skaber.

Så hvad mon 2016 vil bringe? Jeg forudser, at det bliver endnu et spændende og udfordrende år. Der vil være en stadig strøm af nyheder fra vores pipeline, herunder resultaterne af de to store studier, der undersøger forekomsten af hjerte-kar-sygdom: LEADER vedrørende Victoza® og DEVOTE vedrørende insulin degludec. Derudover vil der være stor opmærksomhed på, hvordan Tresiba® klarer sig på det altafgørende amerikanske marked. Læs mere om de vigtigste kommende begivenheder i vores pipeline i oversigten på **side 21** og om vores forventninger til de finansielle resultater i 2016 på **side 8**.

Som altid har jeg haft stor fornøjelse af samarbejdet med mine kolleger i koncerndirektionen, vores Senior Management Board og bestyrelsen om at få det bedste ud af mulighederne og tackle de udfordringer, der ligger forude. Som vores bestyrelsesformand, Göran Ando, skriver i sit brev, omorganiserede vi direktionen i 2015, hvilket medførte, at vores mangeårige koncerndirektør med ansvar for Operations, Kåre Schultz, besluttede sig for at søge nye udfordringer udenfor Novo Nordisk. Jeg har arbejdet sammen med Kåre så længe, jeg kan huske, og jeg har meget stor respekt for hans evner og for det, han har gjort for Novo Nordisk igennem årene. Jeg ønsker ham held og lykke med hans nye karriere.

Sidst, men ikke mindst, vil jeg gerne takke alle i Novo Nordisks organisation for deres bidrag til vores resultater i 2015, de mennesker, der bruger vores produkter, for deres tillid til os, vores interessenter og partnere for godt samarbejde og vores aktionærer for deres fortsatte støtte.



Lars Reben Sørensen  
Administrerende direktør





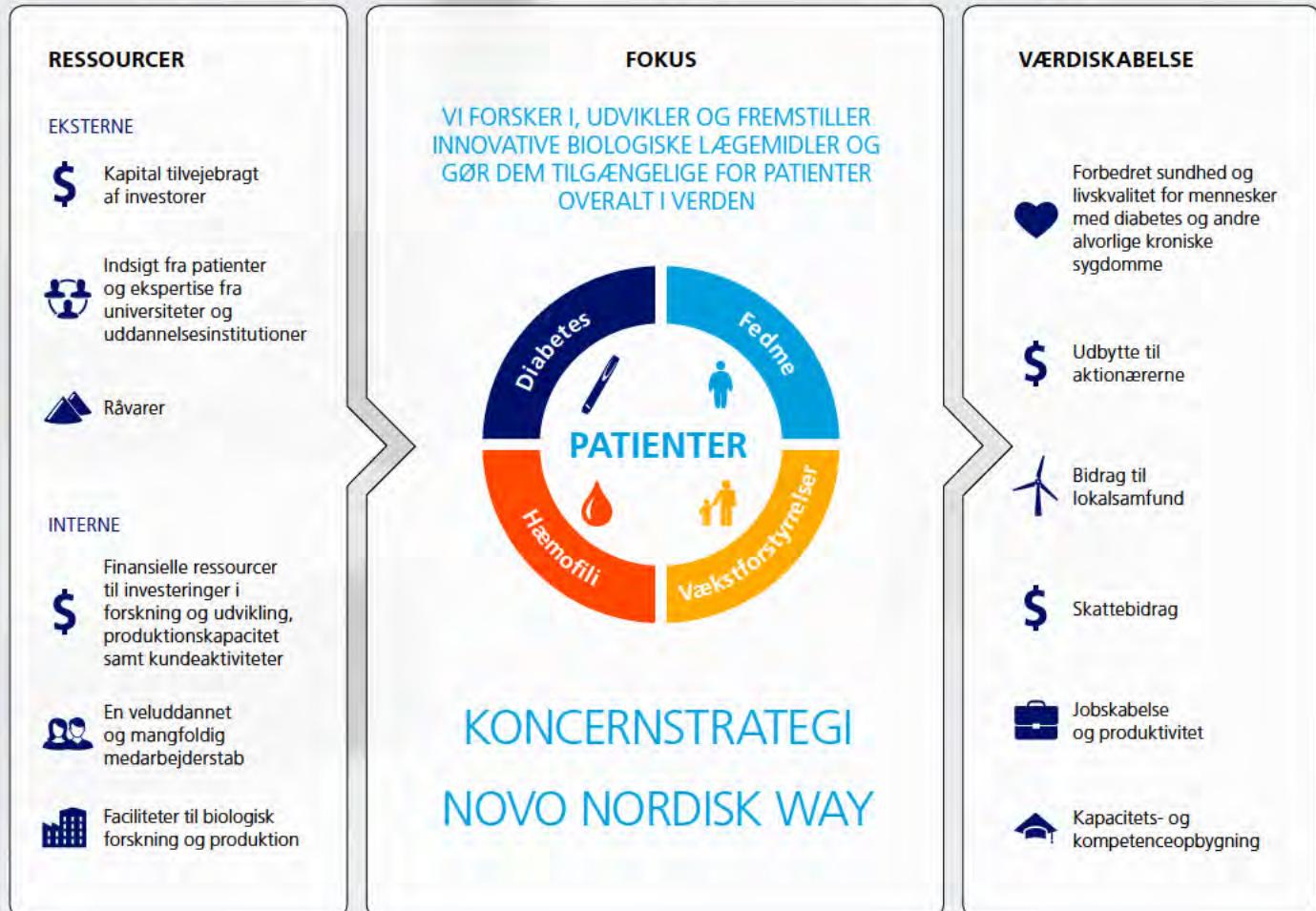
# NOVO NORDISK KORT FORTALT

Novo Nordisk er en global lægemiddelvirksomhed, som igennem mere end 90 år har stået for innovation og lederskab indenfor diabetesbehandling. Dette langvarige engagement har givet os erfaringer og kompetencer, som i dag gør det muligt også at hjælpe med at bekæmpe andre alvorlige kroniske sygdomme: hæmofili, vækstforstyrrelser og fedme. Læs mere på [novonordisk.com](https://novonordisk.com), [Twitter](#), [LinkedIn](#), [YouTube](#) og [Facebook](#).

## VORES FORRETNINGSMODEL

NOVO NORDISKS TILGANG TIL AT SKABE OG FASTHOLDE VÆRDI

Med fokus på patienten skaber Novo Nordisk innovation til gavn for alle virksomhedens interessenter. Princippet om den tredobbelte bundlinje, som er forankret i Novo Nordisk Way, er grundlaget, der gør det muligt at optimere brugen af ressourcer og maksimere værdiskabelsen på en bæredygtig måde.





## GLOBAL ORGANISATION MED LOKAL TILSTEDEVÆRELSE



HOVEDKVARTER  
I DANMARK  
ETABLERET I 1923



PRODUKTER MARKEDSFØRT  
I FLERE END 180 LANDE



DATTERSELSKABER  
ELLER KONTORER I  
75 LANDE



FORSKNINGS- OG  
UDVIKLINGSFACILITETER PÅ  
3 KONTINENTER

## DEN TREDOBBELTE BUNDLINJE



## MENNESKENE, VI FOKUSERER PÅ

**415**  
MIO. MENNESKER LEVER MED  
**DIABETES<sup>1</sup>**

**600**  
MIO. MENNESKER LEVER MED  
**FEDME<sup>2</sup>**

**0,4**  
MIO. MENNESKER LEVER MED  
**HÆMOFILI<sup>3</sup>**

**3**  
UD AF 10.000 BØRN LEVER MED  
**VÆKSTFORSTYRELSE<sup>4</sup>**

\* Fraregnet medarbejdere i NNIT A/S, som blev frasolgt i 2015.



# RESULTATER I 2015

## OG FORVENTNINGER TIL 2016

### FINANSIELLE RESULTATER

Novo Nordisks resultater i 2015 var i tråd med de seneste forventninger, der blev offentliggjort i oktober.

#### SALGSUDVIKLING

Nettoomsætningen steg med 22% opgjort i kroner og med 8% i lokale valutaer. Nordamerika var den største bidragsyder og tegnede sig for 62% af væksten opgjort i lokale valutaer, fulgt af International Operations med 26%. Salgsvæksten blev realiseret indenfor både diabetesbehandling og biopharmaceuticals, og hovedparten af væksten kom fra moderne insulin og Victoza®.

I de følgende afsnit er markedsdata (med mindre andet er anført) baseret på data fra november 2015 og november 2014 opgjort som løbende årstotal, leveret af den uafhængige dataleverandør IMS Health.

#### SALGSUDVIKLINGEN INDENFOR DIABETES- OG FEDMEBEHANDLING

Salget af produkter til diabetes- og fedmebehandling steg med 22% opgjort i kroner og med 9% i lokale valutaer til 85.590 mio. kr. Novo Nordisk er verdens førende virksomhed indenfor diabetesbehandling med en global værdimarkedsandel på 28% mod 27% på samme tidspunkt sidste år. Salget af den nye generation af insulin (Tresiba®,

Ryzodeg® og Xultophy®) nåede 1.438 mio. kr. mod 658 mio. kr. i 2014.

#### INSULIN

Lanceringen af Tresiba® (insulin degludec), den nye generation af basalinsulin til dosering én gang dagligt, fortsætter, og produktet er nu lanceret i 39 lande, herunder i Spanien og USA, med indledningsvis positiv markedsadgang. I Japan, hvor Tresiba® blev lanceret i marts 2013 med tilskud på samme niveau som insulin glargin, har produktet støt øget sin andel af markedet for basalinsulin, og Tresiba® har opnået 33% af markedet opgjort i markedsværdi på månedsbasis. Tilsvarende har Tresiba® vist en solid indtrængning på andre markeder med tilskud på samme niveau som insulin glargin, mens indtrængningen på markeder med begrænset markedsadgang i forhold til insulin glargin stadig er beskeden. Novo Nordisk har i januar 2016 indstillet distributionen af Tresiba® i Tyskland som følge af det negative udfald af prisforhandlingerne med den nationale sammenslutning af lovpligtige sygekasser (GKV-SV).

Ryzodeg®, en opløselig formulering af insulin degludec og insulin aspart, blev for nylig lanceret i Japan som det tredje marked efter lanceringerne i Mexico og Indien. Lanceringsaktiviteterne skrider planmæssigt frem, og de første tilbagemeldinger fra patienter og læger er lovende.

Xultophy®, en kombination af insulin degludec (Tresiba®) og liraglutid (Victoza®), der tages én gang dagligt som én samlet injektion, markedsføres i Schweiz, Tyskland, Storbritannien og Sverige. Lanceringsaktiviteterne skrider planmæssigt frem, og også her er de første tilbagemeldinger fra patienter og læger lovende.

Salget af moderne insulin steg med 21% opgjort i kroner og med 7% i lokale valutaer til 50.164 mio. kr. Nordamerika tegnede sig for 66% af væksten, fulgt af International Operations og Region Kina. Salget af moderne insulin og den nye generation af insulin udgør nu 82% af Novo Nordisks insulinsalg.

#### VICTOZA® (GLP-1 TIL BEHANDLING AF TYPE 2-DIABETES)

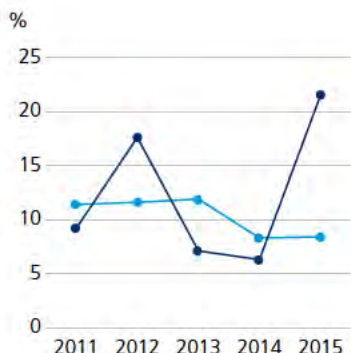
Salget af Victoza® steg med 34% opgjort i kroner og med 18% i lokale valutaer til 18.027 mio. kr. Salgsvæksten er drevet af Nordamerika med et positivt bidrag fra Europa, Japan & Korea og International Operations. GLP-1-segmentets andel af det samlede marked for diabetesbehandling opgjort i værdi er steget til 7,8% mod 7,0% i 2014. Victoza® er markedsleder i GLP-1-segmentet med en værdimarkedsandel på 67%.

#### ØVRIGE PRODUKTER TIL BEHANDLING AF DIABETES OG FEDME

Salget af øvrige produkter til behandling af diabetes og fedme, som primært omfatter

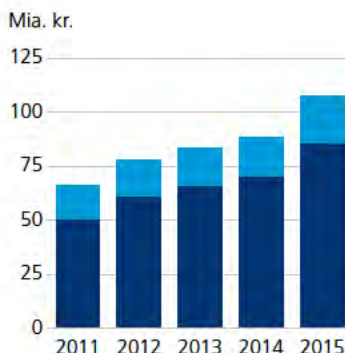
#### SALGSVÆKST

- I lokale valutaer
- Rapporteret i kr.



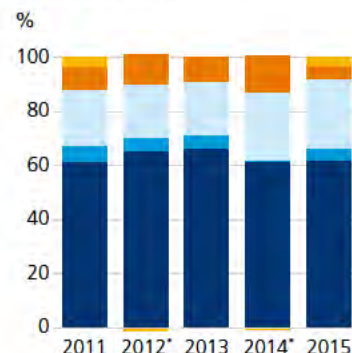
#### SALG FORDELT PÅ SEGMENTER

- Biopharmaceuticals
- Diabetes- og fedmebehandling



#### ANDEL AF VÆKSTEN I LOKALE VALUTAER

- Japan & Korea
- Region Kina
- International Operations
- Europa
- Nordamerika

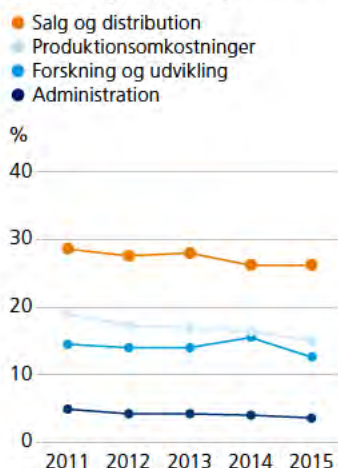


\* I 2012 og 2014 bidrog Japan & Korea med -1% til den samlede vækst.



**UDVIKLING I OMKOSTNINGER**

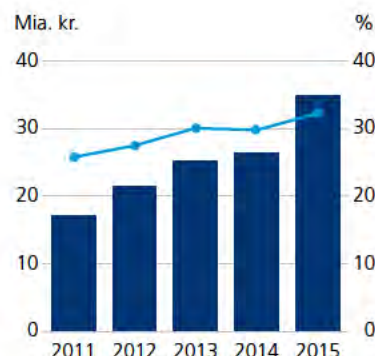
Omkostninger i % af salg

**RESULTAT AF PRIMÆR DRIFT**

● Overskudsgrad (højre)  
■ Resultat af primær drift (venstre)

**ÅRETS RESULTAT**

● Overskudsgrad (højre)  
■ Årets resultat (venstre)



diabeteslægemidler i tabletform, nåle og Saxenda®, steg med 16% opgjort i kroner og med 5% i lokale valutaer til 4.730 mio. kr. Dette afspejler et betydeligt positivt bidrag fra lanceringen i maj 2015 i USA af Saxenda®, liraglutid 3 mg til vægtregulering. I USA har Saxenda® bred markedsadgang i det kommercielle segment, lanceringsaktiviteterne skrider planmæssigt frem, og tilbagemeldingerne fra patienter og læger er lovende. Salgsvæksten blev delvist modsvaret af et faldende salg af nåle i Europa og af diabeteslægemidler i tabletform i Nordamerika og International Operations.

## SALGSUDVIKLINGEN INDENFOR BIOPHARMACEUTICALS

Salget af biopharmaceutiske produkter steg med 19% opgjort i kroner og med 6% i lokale valutaer til 22.337 mio. kr. Salgsvæksten er primært drevet af Nordamerika, International Operations og Europa.

**HÆMOFILI**

Salget af hæmofili produkter steg med 14% opgjort i kroner og med 3% i lokale valutaer til 10.647 mio. kr. Væksten opgjort i lokale valutaer er primært drevet af lanceringen af NovoEight® i Europa, Japan og USA samt af NovoSeven® i International Operations, delvist modsvaret af et lavere salg af NovoSeven® i USA og Japan.

### NORDITROPIN® (VÆKSTHORMONBEHANDLING)

Salget af Norditropin® steg med 20% opgjort i kroner og med 8% i lokale valutaer til 7.820 mio. kr. Salgsvæksten knytter sig primært til Nordamerika og afspejler en gunstig prisudvikling og øget efterspørgsel drevet af det præfyldte FlexPro® pensystem samt af latinamerikanske og mellemøstlige markeder i International Operations. Novo Nordisk er den førende udbyder på det globale vækst-

hormonmarked med en markedsandel på 32% opgjort i volumen.

**ØVRIGE****BIOFARMACEUTISKE PRODUKTER**

Salget af øvrige biopharmaceutiske produkter, primært hormonpræparater (HRT), steg med 28% opgjort i kroner og med 13% i lokale valutaer til 3.870 mio. kr. Salgsvæksten er drevet af en positiv påvirkning fra prisudviklingen for Vagifem® i USA.

## UDVIKLING I OMKOSTNINGER OG RESULTAT AF PRIMÆR DRIFT

Produktionsomkostningerne steg med 11% til 16.188 mio. kr., og bruttomarginen blev dermed 85,0% mod 83,6% i 2014. Dette afspejler en positiv påvirkning fra valutakursudviklingen på 1,5 procentpoint og en positiv påvirkning fra produktsammensætningen, primært som følge af et forøget salg af Victoza® og moderne insulin. Dette er modvirket af omkostninger i forbindelse med ny produktionskapacitet.

Salgs- og distributionsomkostningerne steg med 22% opgjort i kroner og med 9% i lokale valutaer til 28.312 mio. kr. Stigningen er drevet af omkostninger i forbindelse med lanceringen i USA af Saxenda® og NovoEight® samt forberedelser til lanceringen af Tresiba® i USA, investeringer i salgstyrkerne i udvalgte lande i International Operations samt justeringer af hensættelser til retssager.

Forsknings- og udviklingsomkostningerne faldt med 1% opgjort i kroner og med 6% i lokale valutaer til 13.608 mio. kr. Eksklusive alle omkostninger relateret til inflammatoriske sygdomme, et område, Novo Nordisk trak sig ud af i september 2014, steg forsknings- og udviklingsomkostningerne med 8% i forhold til 2014. Stigningen i de underliggende omkostninger afspejler fremdriften i udviklings-

porteføljen af diabetesprojekter i de afsluttede faser og er primært drevet af DEVOTE-studiet, der undersøger forekomsten af hjertekar-sygdom i forbindelse med brug af insulin degludec, samt fase 3a-programmet SUSTAIN vedrørende GLP-1-analogen semaglutid til dosering én gang ugentligt. Stigningen i omkostningerne modsvares delvist af lavere omkostninger relateret til hurtigerevirkende insulin aspart efter afslutning af fase 3a-udviklingsprogrammet onsdag i august 2015.

Administrationsomkostningerne steg med 9% opgjort i kroner og med 4% i lokale valutaer til 3.857 mio. kr.

Andre driftsindtægter (netto) beløb sig til 3.482 mio. kr. mod 770 mio. kr. i 2014. Stigningen er drevet af engangsindtægten på 2.376 mio. kr. fra det delvise frasalg af it-service- og konsulentvirksomheden NNIT A/S i forbindelse med dennes børsnotering på Nasdaq Copenhagen med koden 'NNIT' (ISIN DK0060580512) samt engangsindtægten på 449 mio. kr. relateret til udlicensering af aktiver vedrørende inflammatoriske sygdomme.

Resultat af primær drift steg med 43% i kroner til 49.444 mio. kr. Opgjort i lokale valutaer var væksten 21%, hvilket er en smule højere end den seneste forventning om en vækst i resultat af primær drift for 2015 opgjort i lokale valutaer på 'omkring 20%'. Justeret for indtægterne i forbindelse med det delvise frasalg af NNIT A/S steg resultat af primær drift med 14% opgjort i lokale valutaer.

**NETTOFINANS OG SKAT**

De finansielle poster udviste en nettoudgift på 5.961 mio. kr. mod en nettoudgift på 396 mio. kr. i 2014. De rapporterede finansielle nettoudgifter i 2015 er højere end den seneste forventning om et niveau på 'omkring 5,6 mia. kr.' primært som følge af større tab end forventet på kommercielle tilgodehavender

**FORTSÆTTES ►**



som følge af svækkelsen af den argentinske peso i december 2015, samt en påvirkning fra svækkelsen af den russiske rubel og den brasilianske real i fjerde kvartal af 2015.

I tråd med Novo Nordisks finanspolitik er de væsentligste valutakursrisici for koncernen afdækket, primært gennem valutatermins-kontrakter. Valutaresultatet udgjorde en udgift på 5.898 mio. kr. mod en udgift på 381 mio. kr. i 2014. Denne udvikling afspejler tab på valutaafdækning, navnlig som følge af styrkelsen af den amerikanske dollar i forhold til kronen sammenlignet med de gældende valutakurser i 2014. Pr. 31. december 2015 er tab på valutaafdækning på omkring 700 mio. kr. udskudt til indregning i resultatopgørelsen i 2016.

Den effektive skattesats for 2015 var 19,8%, hvilket er i tråd med den seneste forventning om en skattesats på 'omkring 20%' for året 2015. Den lavere skattesats i forhold til niveauet i 2014 på 22,3% afspejler primært den skattefrie gevinst fra det delvise frasalg af NNIT A/S, den gradvise nedsættelse af selskabsskatten i Danmark fra 24,5% i 2014 til 23,5% i 2015 samt ændringer i hensættelser relateret til internationale skattesager.

## INVESTERINGER OG FRIE PENGESTRØMME

Nettoinvesteringer i materielle anlægsaktiver udgjorde 5,2 mia. kr. mod 4,0 mia. kr. i 2014, hvilket er i tråd med den seneste forventning om 'omkring 5,0 mia. kr.'. Investeringsprojekterne var primært relateret til yderligere insulinpåfyldningskapacitet, udvidelse af produktionskapaciteten for biofarmaceutiske produkter og opførelse af nye forskningsfaciliteter.

De frie pengestrømme udgjorde 34,2 mia. kr. mod 27,4 mia. kr. i 2014, hvilket er i tråd med den seneste forventning om '33–35 mia. kr.'. Stigningen på 25% i forhold til 2014 afspejler primært øgede pengestrømme fra driftsaktiviteter og engangsprovenu fra det delvise frasalg af NNIT A/S.

## FORVENTNINGER TIL 2016

Salgsvæksten for 2016 ventes at blive på 5–9% opgjort i lokale valutaer. Dette afspejler forventninger om et fortsat robust salg af porteføljen af moderne insulin, Victoza® og Tresiba® samt et bidrag fra Saxenda® og Xultophy®. Den positive salgsvækst

## FORVENTNINGER TIL 2016

Nedenstående skema opsummerer de nuværende forventninger til 2016:

### FORVENTNINGERNE ER SOM RAPPORTERET, MEDMINDRE ANDET FREMGÅR

### FORVENTNINGER 3. FEBRUAR 2016

<b>Salgsvækst</b>	
• i lokale valutaer	5–9%
• som rapporteret	Omkring 1 procentpoint lavere
<b>Vækst i resultat af primær drift*</b>	
• i lokale valutaer	5–9%
• som rapporteret	Omkring 1 procentpoint lavere
<b>Nettofinans</b>	Tab på omkring 1,3 mia. kr.
<b>Effektiv skattesats</b>	20–22%
<b>Investeringer i faste anlægsaktiver</b>	Omkring 7,0 mia. kr.
<b>Af- og nedskrivninger</b>	Omkring 3,0 mia. kr.
<b>Frie pengestrømme</b>	36–39 mia. kr.

\* Justeret med 2.376 mio. kr. for det delvise frasalg af NNIT A/S og med 449 mio. kr. for indtægten fra udlicensering af aktiver vedrørende inflammatoriske sygdomme, begge i 2015.

udvikling forventes delvist at blive modvirket af en påvirkning fra et tab på kontrakter i USA, sundhedsreformer, tab af eksklusivitet på produkter indenfor hormonpræparater (HRT), intensiveret konkurrence indenfor såvel diabetesbehandling som biofarmaceutiske produkter samt makroøkonomiske forhold i Kina og en række markeder i International Operations. Givet de nuværende valutakursniveauer i forhold til den danske krone forventes væksten rapporteret i kroner at blive omkring 1 procentpoint lavere end niveauet for væksten opgjort i lokale valutaer.

Væksten i resultat af primær drift for 2016 ventes at blive på 5–9% opgjort i lokale valutaer, justeret med 2.376 mio. kr. for det delvise frasalg af NNIT A/S og med 449 mio. kr. for indtægten fra udlicensering af aktiver vedrørende inflammatoriske sygdomme, begge i 2015. Forventningerne til væksten i resultat af primær drift afspejler vækst i salgs- og distributionsomkostningerne til støtte for fortsatte lanceringsaktiviteter samt i forsknings- og udviklingsomkostninger til støtte for fremdriften i Novo Nordisks udviklingsportefølje. Givet de nuværende valutakursniveauer i forhold til kronen forventes væksten rapporteret i kroner at blive omkring 1 procentpoint lavere end niveauet for væksten opgjort i lokale valutaer.

For 2016 forventer Novo Nordisk finansielle nettoudgifter på omkring 1,3 mia. kr. Den nuværende forventning afspejler primært tab på valutaafdækningskontrakter, hovedsageligt som følge af styrkelsen af den amerikanske

dollar overfor kronen i forhold til de gældende valutakurser i 2015.

Den effektive skattesats for 2016 forventes at blive på 20–22%.

Investeringer i faste anlægsaktiver ventes at blive på omkring 7,0 mia. kr. i 2016, primært relateret til investeringer i en udvidelse af produktionskapaciteten til fremstilling af biofarmaceutiske produkter, yderligere produktionskapacitet til fremstilling af aktive lægemiddelstoffer indenfor diabetesbehandling, udvidelse af insulinpåfyldningskapaciteten og opførelse af nye forskningsfaciliteter. Af- og nedskrivninger forventes at blive på omkring 3,0 mia. kr. Frie pengestrømme forventes at blive på 36–39 mia. kr.

Alle ovenstående forventninger er baseret på en forudsætning om, at den globale økonomiske situation ikke i væsentlig grad ændrer forretningsklimaet for Novo Nordisk i 2016, og at valutakurserne, navnlig den amerikanske dollar, forbliver på deres nuværende niveau overfor danske kroner.

Novo Nordisk har afdækket forventede fremtidige pengestrømme i en række af koncernens faktureringsvalutaer, og alt andet lige vil udsving i kurserne for de vigtigste faktureringsvalutaer påvirke Novo Nordisks resultat af primær drift som vist i skemaet til venstre.

## LANGSIGTEDE FINANSIELLE MÅL

Novo Nordisk introducerede i 1996 fire langsigtede finansielle mål for at skabe balance mellem kort- og langsigtede hensyn og dermed sikre virksomhedens fokus på at skabe værdi for aktionærerne. Målene er siden i flere omgange blevet revideret og opdateret, senest i forbindelse med årsregnskabet for 2012, som blev publiceret i januar 2013.

VIGTIGSTE FAKTURERINGSVALUTAER	ET 5% UDSVING I KURSEN PÅVIRKER PÅ ÅRSBASIS NOVO NORDISKS RESULTAT AF PRIMÆR DRIFT MED	AFDÆKNINGSPERIODE (MÅNEDER)
USD	2.000 mio. kr.	12
CNY	300 mio. kr.	11*
JPY	150 mio. kr.	12
GBP	85 mio. kr.	11
CAD	70 mio. kr.	11

\* USD og kinesiske offshore-yuan (CNY) anvendt som afdækningsvaluta for Novo Nordisks valutarisiko i CNY.



RESULTATER I FORHOLD TIL LANGSIGTEDE FINANSIELLE MÅL	Resultat 2015	Gennemsnit 2012-2015*	Tidligere mål	Opdateret mål
Vækst i resultat af primær drift	43%	23%	15%	10%
Overskudsgrad (primær drift)	46%	40%	40%	N/A**
Resultat af primær drift efter skat i procent af nettodriftsaktiver	149%	111%	125%	125%
Cash to earnings	98%			
Cash to earnings (treårigt gennemsnit)	97%	97%	90%	90%

\* Beregnet som et simpelt gennemsnit. \*\* Der er ikke fastsat et nyt mål, da overskudsgraden (primær drift) forventes at forblive på omkring 44%.

I 2015 nåede Novo Nordisk disse fire langsigtede finansielle mål, og bestyrelsen har derfor godkendt tre opdaterede langsigtede finansielle mål, som er retningsgivende for Novo Nordisk. Målene er revideret ud fra en forventning om et uændret forretningsklima. Væsentlige ændringer i markedsbetingelserne, herunder strukturen i det amerikanske sundhedssystem, myndighedskrav, betingelser vedrørende prisfastsættelse og markedsadgang, konkurrenceforhold, sundhedsreformer, valutakurser og ændrede regnskabsstandarder, kan i væsentlig grad påvirke tidshorisonten for at nå de langsigtede mål eller gøre det nødvendigt at revidere målene.

Målet for den langsigtede vækst i resultat af primær drift er fastsat til 10% afspejlede den nuværende forventning til organisk salgsvækst og muligheder for udvidelse af overskudsgraden (primær drift).

Det nuværende niveau for overskudsgraden (primær drift) på 43,6% (justeret for effekten af det delvise frasalg af NNIT A/S) er opnået gennem løbende produktivitetsforbedringer i produktionen, positiv påvirkning fra prisudvikling, synergier indenfor salg og distribution, omprioritering af fokusområder indenfor forskning og udvikling samt effektivisering af administrative funktioner. Det er en strategisk prioritering fortsat at investere i fremtidig organisk salgsvækst, og følgelig ventes forbedring af overskudsgraden ikke at blive en væsentlig bidragsyder til væksten i resultat af primær drift. Denne forventning afspejler en udvidet produktportefølje, et betydeligt antal produktlanceringer og fortsatte investeringer i forskning og udvikling. Følgelig er der ikke etableret et mål for overskudsgraden (primær drift), da overskudsgraden (primær drift) forventes at forblive på det nuværende niveau på omkring 44%.

Målet for resultat af primær drift efter skat i procent af nettodriftsaktiver er uændret 125%. Dette mål afspejler en forventning om fortsat robust vækst i resultat af primær drift kombineret med en stabil effektiv skattesats og en gradvis stigning i nettodriftsaktiver, delvist relateret til en højere ratio for investeringer i anlægsaktiver i forhold til salg for at imødekomme fremtidig salgsvækst, primært indenfor diabetesbehandling.

Målet for cash to earnings fastholdes på 90%, idet den forventede fortsatte vækst i International Operations og voksende investeringsprioriteringer gradvist vil påvirke nettodriftsaktiverne. Målet vil som hidtil og set i lyset af den naturlige volatilitet i dette nøgletal blive udregnet som et gennemsnit over en treårig periode.

## UDSAGN OM FREMTIDEN

Rapporter fra Novo Nordisk, der indsendes til eller stilles til rådighed for det amerikanske børstilsyn, Securities and Exchange Commission (SEC), herunder dette dokument samt selskabets årsrapport for 2015 og Form 20-F, der begge ventes indsendt til SEC i februar 2016, samt skriftlige eller mundtlige oplysninger, der offentliggøres af eller på vegne af Novo Nordisk i fremtiden, kan indeholde udsagn om fremtiden. I udsagn om fremtiden indgår ofte ord som 'mener', 'forventer', 'eventuelt', 'vil', 'planlægger', 'strategi', 'udsigte', 'forudser', 'skønner', 'fremskriver', 'regner med', 'kan', 'påtænker', 'mål' og andre ord og udtryk med tilsvarende betydning i forbindelse med omtale af fremtidige driftsmæssige eller finansielle resultater. Eksempler på sådanne udsagn om fremtiden omfatter blandt andet, men er ikke begrænset til:

- udsagn om mål, planer, målsætninger eller slutnål for den fremtidige drift, herunder dem, der vedrører Novo Nordisks produkter, produktforskning, produktudvikling, produktlanceringer og produktgodkendelser samt samarbejder herom
- udsagn, der indeholder forventninger til eller mål for omsætning, omkostninger, resultat, resultat pr. aktie, anlægsinvesteringer, udbytte, kapitalstruktur, nettofinans og andre finansielle nøgletal
- udsagn om fremtidige økonomiske resultater, fremtidige handlinger og udfaldet af eventualposter såsom retssager
- udsagn om de antagelser, der ligger til grund for eller vedrører sådanne udsagn.

I dette dokument findes eksempler på udsagn om fremtiden bl.a. under overskriften 'Resultater i 2015 og forventninger til 2016'.

Disse udsagn tager afsæt i nuværende planer, skøn og forventninger. Udsagn om fremtiden er i sagens natur forbundet med risikofaktorer og usikkerhedsmomenter af såvel generel som specifik karakter. Novo Nordisk understreger, at en række væsentlige forhold, heriblandt dem, der er beskrevet i dette dokument, kan forårsage, at de faktiske resultater viser sig at afvige væsentligt fra dem, der tidligere er kommet til udtryk i udsagn om fremtiden.

Faktorer, der kan påvirke de fremtidige resultater, omfatter blandt andet, men er ikke begrænset til, globale og lokale politiske og økonomiske forhold, herunder rente- og valutasingninger, forsinkelser i eller fejlslagne projekter indenfor forskning og/eller udvikling, ikke-planlagte tab af patentrettigheder, driftsforstyrrelser og afbrudte forsyninger, tilbagekaldelse af produkter, uventet misligholdelse eller opsigelse af kontrakter, prisreduktioner på Novo Nordisks produkter dikteret af nationale myndigheder eller som følge af markedsdrevne prisnedsættelser, lancering af konkurrerende produkter, afhængighed af informationsteknologi, Novo Nordisks evne til med succes at markedsføre såvel eksisterende som nye produkter, risiko for produktansvarssager og andre retssager og undersøgelser, ændring af statslige love og dertil knyttede fortolkninger heraf, herunder i relation til tilskud, beskyttelse af immaterielle rettigheder samt myndighedskontrol i forbindelse med afprøvning, godkendelse, fremstilling og markedsføring, formodet eller faktisk manglende overholdelse af etiske markedsføringsprincipper, investering i og frasalg af selskaber i ind- og udland, uventede omkostnings- og udgiftsstigninger, manglende evne til at rekruttere og fastholde de rette medarbejdere og manglende evne til at opretholde en kultur med fokus på efterlevelse af gældende love og regler.

Der henvises endvidere til oversigten over risikofaktorer på s. 42-43.

Medmindre der er tale om et lovkrav, er Novo Nordisk ikke forpligtet og frasiger sig enhver forpligtelse til at opdatere eller revidere udsagn om fremtiden efter offentliggørelsen af dette dokument, hvad enten det skyldes nye oplysninger, fremtidige begivenheder eller andre forhold.



## FORSKNING OG UDVIKLING

2015 blev et år, hvor Novo Nordisk gjorde store fremskridt i sin forsknings- og udviklingspipeline og nåede en række milepæle.

I det følgende gøres rede for nogle af de vigtigste udviklingsprojekter. Pipelineoversigten på s. 20 viser alle de præparater, der er i klinisk udvikling, og yderligere detaljer om resultater af kliniske studier kan ses i de selskabsmeddelelser og pressemeddelelser, som Novo Nordisk har udsendt i 2015, og som kan findes på [novonordisk.com](http://novonordisk.com).

### DIABETES

I marts 2015 besluttede Novo Nordisk at indsende en ny registreringsansøgning for Tresiba® og Ryzodeg® 70/30 i USA. Den nye ansøgning var baseret på interimanalysen fra DEVOTE-studiet, der undersøger forekomsten af hjerte-kar-sygdom i forbindelse med brug af Tresiba®. For ikke at kompromittere integriteten af det igangværende DEVOTE-studie havde kun en lille gruppe medarbejdere internt i Novo Nordisk adgang til dataene og traf beslutningen om at indsende en ny registreringsansøgning. Novo Nordisks ledelse har ikke adgang til resultaterne af interimanalysen. DEVOTE-studiet forventes at være afsluttet medio 2016, og resultaterne forventes offentliggjort i andet halvår af 2016.

På baggrund af den nye ansøgning (class II) godkendte de amerikanske sundhedsmyndigheder (FDA) i september 2015 Tresiba® og Ryzodeg® 70/30 til behandling af diabetes hos voksne. Efter godkendelsen blev Tresiba® lanceret til amerikanske diabetesspecialister i november 2015 og mere bredt i januar 2016.

I januar 2016 blev resultaterne fra det dobbeltblinde fase 3b-studie SWITCH 2 offentliggjort. Studiets primære mål blev opfyldt, idet det viste en statistisk signifikant lavere forekomst af alvorlig eller symptomatisk hypoglykæmi bekræftet ved blodsukermåling i vedligeholdelsesperioden på 30% for deltagere, der blev behandlet med Tresiba®, sammenlignet med insulin glargin.

I august 2015 besluttede Novo Nordisk at iværksætte et fase 3a-program med oral semaglutid – en tabletformulering af den langtidsvirkende GLP-1-analog semaglutid til dosering én gang dagligt. Beslutningen blev truffet på baggrund af de positive resultater af fase 2-studiet (clinical proof of concept), som blev offentliggjort i februar 2015, og efterfølgende konsultationer med de regulatoriske myndigheder. De positive resultater fra fase 2-studiet udgør en vigtig milepæl for Novo Nordisks ambition om at levere og producere proteinbaserede lægemidler som semaglutid i tabletform.

Novo Nordisk vil iværksætte et globalt fase 3a-program under betegnelsen PIONEER, som skal omfatte 10 studier med mere end 9.000 mennesker med type 2-diabetes. PIONEER-programmet vil omfatte ni sikkerheds- og effektstudier og ét studie, der skal evaluere den kardiovaskulære sikkerhed ved oral semaglutid.

I september 2015 indsendte Novo Nordisk en registreringsansøgning til FDA for Xultophy®, den første kombination af Tresiba® (insulin degludec) og Victoza® (liraglutid), der tages én gang dagligt som én samlet injektion. Ansøgningen bliver for øjeblikket gennemgået i henhold til den amerikanske Prescription Drug User Fee Act V (PDUFA V).

I andet halvår af 2015 afsluttede Novo Nordisk fire ud af seks fase 3a-studier med semaglutid som en del af SUSTAIN-programmet. Semaglutid er en ny GLP-1-analog, der indgives subkutant én gang ugentligt til behandling af type 2-diabetes hos voksne. De foreløbige data bekræfter semaglutids stærke effektprofil, og stoffet har i studierne vist sig at være sikkert og veltolereret.

I december 2015 indsendte Novo Nordisk en ansøgning om markedsføringstilladelse til Det Europæiske Lægemiddelagentur (EMA) og en registreringsansøgning til FDA for hurtigerevirkende insulin aspart, en måltidsinsulin, som giver bedre regulering af blodsukkerudsving efter måltider og er udviklet til behandling af type 1- og type 2-diabetes.

Ansøgningerne er baseret på resultater fra det kliniske program onset, som havde 2.100 deltagere med type 1- og 2-diabetes. I dette program opnåede deltagere, som fik den hurtigerevirkende insulin aspart, forbedret blodsukkerregulering efter måltider i forhold til deltagere, som fik NovoRapid®, og en reduktion af HbA<sub>1c</sub> på samme niveau som for NovoRapid®. I samtlige studier i onset-programmet udviste hurtigerevirkende insulin aspart en sikker og veltolereret profil. Den mest almindelige bivirkning var hypoglykæmi på samme niveau som for NovoRapid®.

### FEDME

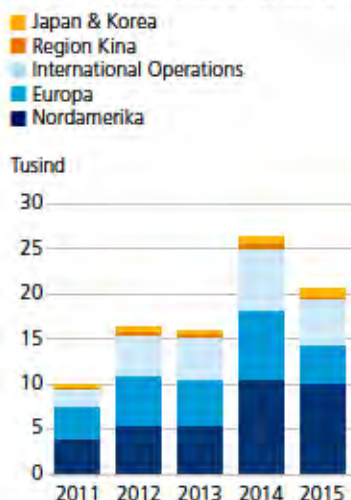
I marts 2015 gav Europa-Kommissionen markedsføringstilladelse til Saxenda® (liraglutid 3 mg) til behandling af fedme. Saxenda® er den første GLP-1-analog (glukagonlignende peptid-1) til dosering én gang dagligt til behandling af fedme, som er blevet godkendt i Europa. Saxenda® er i EU godkendt som supplement til en kalorie reduceret diæt og øget fysisk aktivitet til vægtregulering hos voksne med et BMI  $\geq 30$  kg/m<sup>2</sup> (svær overvægt) eller 27–30 kg/m<sup>2</sup> (overvægt) med mindst én vægtrelateret komplikation (komorbiditet), f.eks. dysglykæmi, forhøjet blodtryk, dyslipidæmi eller obstruktiv søvn-åpne. Saxenda® blev lanceret i Danmark i august 2015 og i USA i maj efter FDA's godkendelse i december 2014. Novo Nordisk vil fortsætte den globale lancering af Saxenda® i 2016 og forventer at lancere produktet i op til 10 lande i 2016.

### HÆMOFILI

I januar 2016 indsendte Novo Nordisk en ansøgning om markedsføringstilladelse til EMA for langtidsvirkende faktor IX, nonacog beta pegol, et glykopegyleret rekombinant faktor IX-præparat med betydeligt forbedret farmakokinetisk profil til behandling af hæmofili B. Novo Nordisk forventer at indsende registreringsansøgning (BLA) for nonacog beta pegol til FDA i første halvår af 2016.

I november 2015 blev der indrapporteret nye data for langtidsvirkende rekombinant faktor VIII, N8-GP (turoctocog alfa pegol), fra første del af pathfinder™2-forlængelsesstudiet. Dataene understøtter yderligere, at N8-GP (turoctocog alfa pegol) syntes at have en sikker og veltolereret profil, og at 95% af lette til moderate blødninger kan behandles med én eller to infusioner.

#### PATIENTÅR I KLINISKE STUDIER\*



\* Et patientår er udregnet som det samlede antal måneder, en patient deltager i kliniske forsøg, delt med 12.



## SOCIALE RESULTATER

Sociale resultater opgøres på tre dimensioner: forbedret adgang til medicinsk behandling og kvalitet i behandlingen for patienter, et sundt og engagerende arbejdsklima samt processer, der skal sikre, at virksomheden ledes ansvarligt med henblik på at bidrage til de samfund, hvor virksomheden har aktiviteter.

### PATIENTER

Kun lidt over halvdelen af verdens 415 mio. diabetikere<sup>1</sup> er diagnosticeret, og mange af dem, der har fået stillet diagnosen, får ikke medicinsk behandling.

Novo Nordisk har som led i sin globale strategi for adgang til diabetesbehandling sat et langsigtet mål om at nå ud til 40 mio. mennesker med sine diabetesprodukter i 2020, en fordobling i forhold til udgangspunktet i 2010. Formålet er at gøre det muligt for flere mennesker med diabetes at få medicinsk behandling.

Novo Nordisk anslår, at koncernen på verdensplan i 2015 leverede behandling til ca. 26,8 mio. mennesker med diabetes mod 24,4 mio. i 2014, beregnet på grundlag af WHO's anbefalede daglige dosis for diabeteslægemidler. Tallet afspejler, at dersamlet set var flere, der blev behandlet med Novo Nordisks insulinprodukter, og er primært drevet af human insulin i International Operations (1,2 mio. mennesker) samt af den moderne og den nye generation af insulinprodukter globalt (0,9 mio. mennesker). Novo Nordisk har fokus på at forbedre kvaliteten af behandlingen gennem produktinnovation og ønsker at sikre bedre adgang til medicinsk behandling for mennesker med diabetes over hele verden. Virksomheden har flere programmer målrettet mod mennesker i lav- og mellemindkomstlande med begrænset adgang til sundhedsydelser.

Novo Nordisk solgte human insulin i henhold til virksomhedens differentierede prispolitik i 23 af verdens 48 fattigste lande (de såkaldte LDC-lande), mod 32 lande i 2014. Ifølge denne politik må prisen ikke overstige 20% af gennemsnitsprisen for insulin i den vestlige verden (defineret som EU, Norge, Schweiz, USA, Canada og Japan). I 2015 var prisloftet for insulinbehandling i henhold til politikken på 0,19 amerikanske dollar om dagen pr. patient, mens den gennemsnitlige realiserede salgspris for insulin var på 0,15 dollar, svarende til 3,85 dollars pr. hætteglas. Faldet i antallet af lande skyldes færre udbudte licitationer på insulin i 2015 og manglende svar fra myndigheder eller private grossister og andre partnere på Novo Nordisks tilbud. Det samlede antal patienter, som blev

behandlet med insulin solgt til en pris, der var lig med eller under prisloftet, var ca. 411.000 i 2015, hvilket er et svagt fald i forhold til ca. 431.000 i 2014. Udover gennem dette program sælger Novo Nordisk human insulin til tilsvarende priser i lavindkomstlande. I 2015 blev ca. 5,5 mio. mennesker behandlet med insulin til 0,19 dollar eller derunder om dagen, svarende til en pris pr. hætteglas på 4,81 dollars eller derunder. Til sammenligning blev ca. 4,3 mio. mennesker behandlet med insulin til priser inden for prisloftet i 2014.

Der blev fortsat gjort fremskridt i 2015 med Novo Nordisks initiativer under overskriften Changing Diabetes<sup>®</sup>, der skal hjælpe flere mennesker med diabetes og fremme kapacitetsopbygning. Changing Diabetes<sup>®</sup> in Children er nu etableret i ni lande og er siden lanceringen i 2009 nået ud til mere end 13.400 børn, som får gratis insulinbehandling. Der er etableret 108 klinikker, og mere end 6.500 behandlere er blevet undervist eller genundervist. Changing Diabetes<sup>®</sup> in Pregnancy, som også blev lanceret i 2009, har siden starten screenet mere end 33.300 kvinder for svangerskabsdiabetes, og mere end 3.800 kvinder er blevet diagnosticeret og efterfølgende behandlet. Programmet Base of the Pyramid har siden lanceringen i 2011 etableret syv Diabetes Support Centres i Nigeria og seks i Ghana. Indsatsen i Kenya er blevet intensiveret for at bygge større kapacitet og sikre forsyninger. Endvidere er der etableret to nye kompetencecentre i diabetesbehandling i offentligt regi i Kenya på lokalt niveau i 2015.

I 2014 lancerede Novo Nordisk Cities Changing Diabetes – et tværfagligt partnerskabsprogram på tværs af sektorer, som skal identificere og gøre en indsats overfor årsagerne til den stigende forekomst af type 2-diabetes i byer. Programmet omfatter for øjeblikket Mexico City, København, Houston, Tianjin og Shanghai og dækker således over 60 mio. mennesker. I 2016 vil Vancouver og Johannesburg også blive inkluderet. Formålet med programmet er at skabe varig forandring. Tiltagene vil bygge på ny forskning i de kulturelle og sociale faktorer, som vil gøre det lettere at gennemføre integrerede og bæredygtige løsninger i byerne.

Donationer via Verdensdiabetesfonden beløb sig til 78 mio. kr. i 2015. Verdensdiabetesfonden er en uafhængig nonprofit-organisation oprettet af Novo Nordisk i 2002 for at hjælpe med at skabe bedre adgang til diabetesbehandling. Fonden investerer i bæredygtige tiltag til at opbygge sundhedskapacitet med henblik på at forbedre forebyggelse og behandling af dia-

betes i udviklingslande. I 2015 støttede Verdensdiabetesfonden 22 nye projekter. Disse omfatter bl.a. projekter med fokus på forebyggelse og andre, der fokuserer på at nå ud til mennesker i de fjerneste landområder. Læs mere på [worlddiabetesfoundation.org](http://worlddiabetesfoundation.org).

Novo Nordisk arbejder også for bedre adgang til hæmofili behandling i hele verden gennem økonomisk støtte til Novo Nordisk Haemophilia Foundation, der blev oprettet i 2005. I 2015 donerede virksomheden 19 mio. kr. til fonden, som støtter projekter og stipendier i udviklingslande og vækstøkonomier. Projekterne fokuserer på kapacitetsopbygning, oplysning, diagnosticering og oprettelse af patientregistre. Læs mere på [nnhf.org](http://nnhf.org).

### MEDARBEJDERE

Novo Nordisk havde ved udgangen af 2015 41.122 medarbejdere svarende til 40.638 fuldtidsstillinger, et fald på 1% i forhold til 2014, som skyldes frasalg af NNIT A/S i marts 2015. Den underliggende vækst (5%) er primært relateret til udvidelser i International Operations samt i Danmark, hovedsageligt inden for forskning og udvikling samt produktion.

Medarbejderomsætningen steg fra 9,0% i 2014 til 9,2%, primært som følge af udviklingen i Region China. I tidligere år har tallet ligget på 8–10%.

Den samlede score i den årlige medarbejderundersøgelse, eVoice, var 4,3 ligesom i 2014 målt på en skala fra 1 til 5, hvor 5 er bedst. Undersøgelsen måler, i hvor høj grad organisationen arbejder i overensstemmelse med Novo Nordisk Way. Resultatet for 2015 afspejler en stærk kultur og opbakning til virksomhedens værdier.

For at sikre et robust rekrutteringsgrundlag af talentfulde medarbejdere til lederstillinger er der sat en aspiration, der tilstræber øget mangfoldighed i alle ledelsesteam, inklusive afdelingsledere og mellemledere. Ved udgangen af 2015 var 59% af lederne mænd og 41% kvinder. Af de nyligt udnævnte ledere var 44% kvinder.

I 2015 døde en af vores salgsrepræsentanter i Indien i en tragisk trafikulykke, mens den pågældende var på arbejde. Den gennemsnitlige frekvens for ulykker med fravær faldt til 3,0 pr. million arbejdstimer fra 3,2 i 2014. Novo Nordisk stiler mod nul ulykker, og det langsigtede mål er hele tiden at styrke risikobevistheden og forebygge arbejdsulykker for alle medarbejdere.

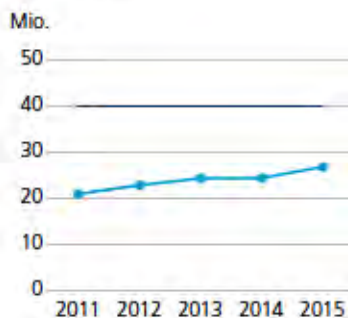
FORTSÆTTES ►



**DIABETIKERE, SOM ANVENDER NOVO NORDISKS PRODUKTER**

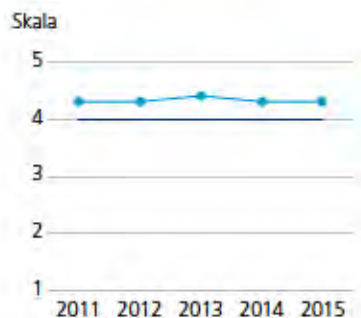
Estimat

● Realiseret  
— Mål (2020)

**EFTERLEVELSE AF NOVO NORDISK WAY**

Gennemsnitsresultat i årlig medarbejdervurdering

● Realiseret  
— Mål



Inspektionerne måles i forhold til de amerikanske sundhedsmyndigheder (FDA), Det Europæiske Lægemiddelagentur (EMA), det japanske PMDA, Lloyd's Register Quality Assurance (LRQA) og nationale myndigheder for strategiske produktionsanlæg. Der blev gennemført 82 inspektioner i 2015 på Novo Nordisks produktionsanlæg, på klinikker, som udfører forskning for Novo Nordisk, eller med henblik på frivillig ISO 9001-certificering mod 59 inspektioner i 2014. Ved årets udgang var 57 blevet godkendt, mens 25 var uafklarede.

Novo Nordisk arbejder på at opfylde sine forpligtelser om at respektere menneskerettigheder som angivet i FN's Retningslinjer for Erhverv og Menneskerettigheder. Første skridt i 'Due diligence' (rettidig omhu) var en kortlægning af, hvordan hele organisationen overholder de internationalt anerkendte menneskerettigheder. Novo Nordisk anerkender sit ansvar for at sikre respekt for menneskerettigheder, herunder ret til sundhed, ret til privatlivets fred, ret til en løn man kan leve af og ret til et sikkert og sundt arbejdsmiljø. Kortlægningen har vist, at der er velfungerende ledelsessystemer. Dette er en kontinuerlig opgave, som fordrer årvågenhed og løbende forbedring.

En virksomheds omdømme blandt væsentlige interessenter er en indikator for, i hvilket omfang virksomheden lever op til deres forventninger. Jo bedre omdømme, desto større er sandsynligheden for, at interessenterne vil have tillid til, støtte og indgå i samarbejder med virksomheden. Novo Nordisk måler årligt sit omdømme ved hjælp af RepTrak® modellen, som er udviklet af Reputation Institute. Omdømmet måles på en skala fra 0 til 100, hvor en score på over 80 anses for fremragende. I 2015 opnåede Novo Nordisk en score på 82,4 mod 80,8 i 2014.

**LANGSIGTEDE SOCIALE MÅL**

Novo Nordisk har valgt to langsigtede sociale mål (se figurer denne side), som skal understøtte de langsigtede finansielle resultater ved at tage hensyn til såvel ansvar som indtjening. Formålet er at skabe langsigtet værdi for aktionærer og andre interessenter. De sociale mål afspejler de ambitioner, der er udtrykt i Novo Nordisk Way: at hjælpe mennesker til at leve et bedre liv og at efterleve Novo Nordisk Way. Det langsigtede patientmål ventes opfyldt. Udviklingen fra år til år vil variere, idet den påvirkes af vundne og mistede store licitationer og kontrakter.

Læs mere om Novo Nordisks sociale resultater i det sociale regnskab på s. 96-101 i den engelske årsrapport og i UNGC Communication on Progress på [novonordisk.com/annualreport](http://novonordisk.com/annualreport).

**INTERNE KONTROLLER OG MONITORERING**

Uddannelse i forretningsetik er obligatorisk og har høj prioritet. Alle medarbejdere, også nyansatte, skal en gang om året deltage i undervisning i forretningsetik, ligesom det også er et vigtigt element i introduktionsprogrammerne for nye medarbejdere. Ligesom i 2014 gennemførte 98% af alle relevante medarbejdere i 2015 den obligatoriske uddannelse med fornøden dokumentation og bestod de tilknyttede prøver. Det høje niveau tilskrives det konstante fokus og kommunikation fra den øverste ledelse om vigtigheden af at efterleve de forretnings-etiske regler.

Virksomhedens globale standarder for etisk adfærd skal efterleves, og det overvåges løbende, at det sker. Der foretages interne opfølgninger med interview og gennemgang af dokumentation for at vurdere, i hvor høj grad krav og interne procedurer efterleves. I 2015 blev der gennemført 49 af disse aktiviteter, sammenholdt med 42 i 2014.

I årets løb gennemførte det globale facilitatorteam 65 faciliteter af enheder i organisationen, omfattede ca. 18.500 medarbejdere, hvoraf 15% blev interviewet. Faciliteterne i 2015 viste et højt niveau for efterlevelse af Novo Nordisk Way. En facilitering består af gennemgang af dokumenter og interview med enhedens ledelse, medarbejdere og interessenter for at vurdere, i hvor høj grad organisationen efterlever Novo Nordisk Way i praksis med hensyn til værdier og adfærd.

Bedste praksis deles internt, mens observationer af adfærd, der ikke lever op til Novo Nordisk Way, rapporteres til den lokale ledelse, som efterfølgende skal iværksætte korrigerende handlinger. I 2015 blev 94% af

aktionspunkterne lukket rettidigt. En endelig rapport, der præsenteres for bestyrelsen, sammenfatter de vigtigste observationer og tendenser fra alle faciliteter, og konklusionen for 2015 er, at der var en høj grad af efterlevelse af Novo Nordisk Way overalt i organisationen. Vores 10 essentials danner grundlaget for gennemførelsen af Novo Nordisk Way. Læs mere på s. 18 og på [novonordisk.com/about-novo-nordisk/novo-nordisk-way](http://novonordisk.com/about-novo-nordisk/novo-nordisk-way).

Der blev i alt gennemført 240 auditeringer af leverandører for at sikre, at de lever op til virksomhedens standarder. Auditeringerne omfatter kvalitet, miljø, arbejdsforhold, menneskerettigheder og forretningsetik i overensstemmelse med Novo Nordisks politik for ansvarligt indkøb. Leverandørauditeringerne gennemføres af Novo Nordisks globale kvalitetsorganisation. Antallet af auditeringsaktiviteter steg fra 224 auditeringer i 2014 på grund af ledelsens beslutning om at bygge nye fabrikker. Af auditeringerne i 2015 var 28 fokuseret på ansvarlighed i leverandørkæden, en svag stigning i forhold til 25 auditeringer i 2014. Kun højrisikoleverandører identificeret på basis af en grundig risikovurdering udvælges til auditeringer af ansvarlighed i leverandørkæden. Der blev fundet én kritisk afvigelse i forbindelse med kvalitetsauditeringen i 2015. Et løbende forbedrings- og involveringsprogram er blevet igangsat med leverandøren for at rette op på afvigelsen.

Ligesom i 2014 havde Novo Nordisk i 2015 to produkttilbagekaldelser. Begge tilbagekaldelser skyldtes ukorrekt mærkning af produkter. I begge tilfælde blev de lokale sundhedsmyndigheder informeret for at sikre, at distributører, apoteker, læger og patienter modtog den fornødne information.

Ligesom i 2014 var der i 2015 ingen ikke-godkendte inspektioner blandt de inspektioner, som var afsluttet ved årets udgang.



# MILJØMÆSSIGE RESULTATER

Novo Nordisks miljøresultater måles på fire dimensioner: energiforbrug, vandforbrug, CO<sub>2</sub>-emissioner fra energiforbrug samt affald.

## ENERGI OG VAND

I 2015 var energiforbruget på Novo Nordisks produktionsanlæg rundt om i verden på 2.778.000 GJ, og vandforbruget var på 3.131.000 m<sup>3</sup>. Energiforbruget steg med 9% og vandforbruget med 6% trods fortsat fokus på procesoptimeringer. Denne udvikling afspejler øget produktion og kapacitet. 14% af vandet bruges i produktionsanlæg beliggende i områder med knaphed på vand i Brasilien og Kina. Disse anlæg har særligt fokus på ansvarligt vandforbrug.

## CO<sub>2</sub>-EMISSIONER

Novo Nordisks klimaprogram har primært haft fokus på at reducere CO<sub>2</sub>-emissioner fra produktion og distribution af produkter, men virksomheden udvider nu programmet, så det også omfatter indirekte emissioner fra relevante forretningsaktiviteter. I første omgang er der fokus på leverandørkæden og emissioner fra firmabiler og forretningsrejser. Læs mere om Novo Nordisks klimaambition på s. 40.

CO<sub>2</sub>-emissioner fra energiforbrug til produktion faldt med 11% på trods af stigningen i energiforbruget på 9%. Fabrikken i Tianjin, Kina, er begyndt at købe vindenergi fra en vindmøllepark i Indre Mongoliet, og fabrikkerne i Danmark køber nu

bionaturgas, som er biogas fremstillet af gylle, madaffald og organisk industriaffald. Biogassen opgraderes, så den opfylder kvalitetskravene til naturgas og leveres via naturgasnettet.

CO<sub>2</sub>-emissioner fra transport (produktdistribution) faldt betydeligt med 25% i forhold til 2014, primært fordi flere produkter transporteres ad søvejen, en stigning fra 72% i 2014 til 83% i 2015. I 2015 udgjorde CO<sub>2</sub>-emissioner fra søtransport 16%, landevejstransport 5% og lufttransport 79% af de samlede emissioner. Novo Nordisk prioriterer at transportere så mange produkter som muligt ad søvejen, da det nedbringer både CO<sub>2</sub>-emissioner og omkostninger.

Novo Nordisk bestræber sig også på at reducere CO<sub>2</sub>-emissioner fra forretningsrejser med fly og firmabiler. Opgørelser viser, at forretningsrejser med fly i 2015 medførte CO<sub>2</sub>-emissioner på 74.000 tons, hvilket er en stigning på 9% i forhold til 2014. CO<sub>2</sub>-emissioner fra leasede firmabiler faldt med 7% fra 72.000 tons i 2014 til 67.000 tons.

## AFFALD

I 2015 genererede Novo Nordisk 34.715 tons affald, hvilket er en stigning på 13% sammenlignet med 2014. Stigningen skyldes primært en større mængde af ikke-genanvendelig ethanol, der anvendes i oprensningsprocesserne ved insulinproduktion. Reduktion af ethanolaffaldet har høj prioritet, og effektive regenereringsanlæg giver mulighed for, at brugt ethanol kan genbruges mange gange.

## LANGSIGTEDE MILJØMÅL

Den langsigtede målsætning er at afkoble vand- og energiforbruget fra salgsvæksten. Det aktuelle mål er fastsat til maksimalt halvdelen af den procentvise salgsvækst opgjort i lokale valutaer som et treårigt gennemsnit. I 2015 steg salget med 8% opgjort i lokale valutaer, mens energiforbruget steg med 9% og vandforbruget med 6%. Målet er udfordret af produktionsudvidelse og lavere vækstrater for salg.

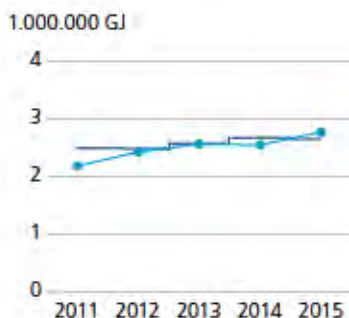
## NYT LANGSIGTET MÅL FOR CO<sub>2</sub>-EMISSIONER

Novo Nordisk har sat et nyt langsigtet mål for reduktion af CO<sub>2</sub>-emissioner. Et bærende element i strategien er at øge andelen af vedvarende energi. I 2020 vil 100% af elforbruget i samtlige Novo Nordisks produktionsanlæg rundt om i verden komme fra vedvarende energikilder. Som medlem af koalitionen We Mean Business har Novo Nordisk underskrevet RE100- initiativet, der ledes af The Climate Group i partnerskab med CDP. Det er et initiativ med deltagelse af indflydelsesrige virksomheder, som har forpligtet sig til at stille mod målet om, at 100% af elforbruget skal komme fra vedvarende energikilder, og som arbejder for at øge virksomhedernes efterspørgsel efter vedvarende energi.

Læs mere om Novo Nordisks miljømæssige resultater i det miljømæssige regnskab på s. 102-104 i den engelske årsrapport og i UNGC Communication on Progress på [novonordisk.com/annualreport](http://novonordisk.com/annualreport).

### ENERGIFORBRUG

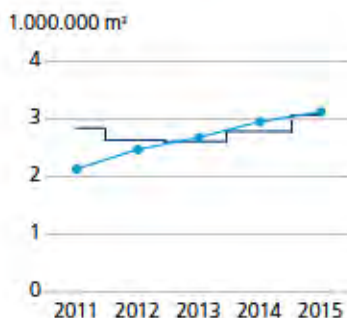
● Realiseret  
— Mål (der ikke må overskrides)\*



\* Fra 2007 til 2011 var målet sat som en akkumuleret reduktion over fire år med udgangspunkt i 2007.

### VANDFORBRUG

● Realiseret  
— Mål (der ikke må overskrides)\*



\* Fra 2007 til 2011 var målet sat som en akkumuleret reduktion over fire år med udgangspunkt i 2007.



## HOVED- OG NØGLETAL

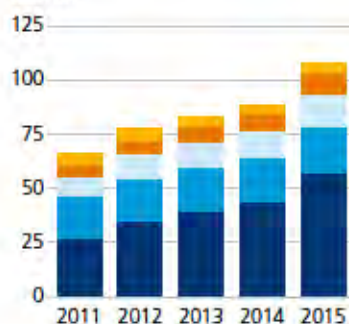
	2011	2012	2013	2014	2015	2014-2015	
<b>FINANSIELLE RESULTATER</b>						<b>Ændring</b>	<b>Ekskl. NNIT A/S<sup>1</sup></b>
Nettoomsætning	66.346	78.026	83.572	88.806	107.927	22%	
Underliggende vækst i salg i lokal valuta	11,4%	11,6%	11,9%	8,3%	8,4%		
Valutapåvirkning (påvirkning, lokal valuta)	(2,2%)	6,0%	(4,8%)	(2,0%)	13,1%		
Rapporteret omsætningsvækst	9,2%	17,6%	7,1%	6,3%	21,5%		
Af- og nedskrivninger	2.737	2.693	2.799	3.435	2.959	(14%)	
Resultat af primær drift	22.374	29.474	31.493	34.492	49.444	43%	36%
Finansielle poster (netto)	(449)	(1.663)	1.046	(396)	(5.961)	N/A	
Resultat før skat	21.925	27.811	32.539	34.096	43.483	28%	21%
Årets resultat	17.097	21.432	25.184	26.481	34.860	32%	22%
Aktiver i alt	64.698	65.669	70.337	77.062	91.799	19%	
Egenkapital	37.448	40.632	42.569	40.294	46.969	17%	
Anlægsinvesteringer (netto)	3.003	3.319	3.207	3.986	5.209	31%	
Frie pengestrømme	18.112	18.645	22.358	27.396	34.222	25%	17%
<b>NØGLETAL</b>							
I procent af omsætningen							
Salg uden for Danmark	99,3%	99,4%	99,4%	99,5%	99,7%		
Salgs- og distributionsomkostninger	28,6%	27,6%	28,0%	26,2%	26,2%		
Forsknings- og udviklingsomkostninger	14,5%	14,0%	14,0%	15,5%	12,6%		
Administrationsomkostninger	4,9%	4,2%	4,2%	4,0%	3,6%		
Bruttomargin	81,0%	82,7%	83,1%	83,6%	85,0%		
Overskudsgrad	25,8%	27,5%	30,1%	29,8%	32,3%		
Effektiv skatteprocent	22,0%	22,9%	22,6%	22,3%	19,8%		
Egenkapitalandel	57,9%	61,9%	60,5%	52,3%	51,2%		
Forrentning af egenkapitalen	46,0%	54,9%	60,5%	63,9%	79,9%		
Cash/earnings	105,9%	87,0%	88,8%	103,5%	98,2%		
Udbytteandel	45,3%	45,3%	47,1%	48,7%	46,6%		
Udbytteandel justeret for NNIT A/S <sup>3</sup>	45,3%	45,3%	47,1%	48,7%	50,0%		
<b>LANGSIGTEDE FINANSIELLE MÅL</b>							<b>2015 mål<sup>2</sup></b>
Vækst i resultat af primær drift	18,4%	31,7%	6,9%	9,5%	43,3%		15%
Vækst i resultat af primær drift i lokal valuta	22,1%	20,2%	14,6%	12,7%	20,6%		
Overskudsgrad (primær drift)	33,7%	37,8%	37,7%	38,8%	45,8%		40%
Resultat af primær drift efter skat i procent af nettodriftsaktiver	77,9%	99,0%	97,2%	101,0%	148,7%		125%
Cash/earnings (treårigt gennemsnit)	112,8%	103,7%	93,9%	93,1%	96,8%		90%

1. Justeret for engangsindtægt fra den delvise afhændelse af NNIT A/S på 2.376 mio. kr. og engangsprovener i frie pengestrømme på 2.303 mio. kr. 2. De langsigtede finansielle mål blev opdateret i februar 2016, jf. 'Forventninger til 2016' på s. 8. 3. Resultatpåvirkning fra den delvise afhændelse af NNIT A/S blev betalt til Novo Nordisks aktionærer gennem en stigning i aktietilbagekøbsprogrammet på 2,5 mia. kr. der blev annonceret i april 2015.

## SALG FORDELT PÅ GEOGRAFISKE REGIONER

Japan & Korea  
Region Kina  
International Operations  
Europa  
Nordamerika

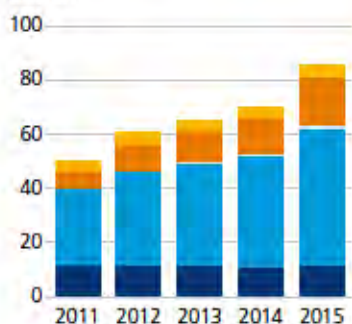
Mia. kr.



## SALG AF DIABETES- OG FEDMEBEHANDLING

Øvrige diabetes- og fedmeprodukter  
Victoza®  
Ny generation af insulin  
Moderne insulin (insulinanaloger)  
Humane insulin

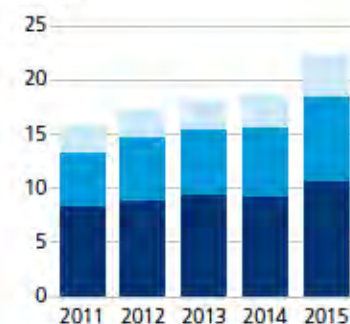
Mia. kr.



## SALG AF BIOPHARMACEUTICALS

Øvrige biopharmaceuticals  
Norditropin®  
Hæmofili

Mia. kr.

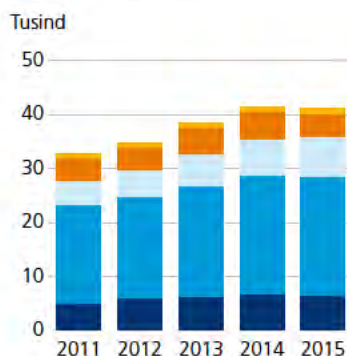




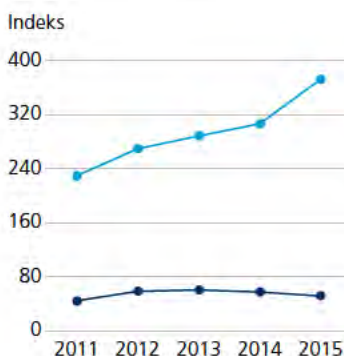
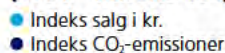
	2011	2012	2013	2014	2015	2014–2015
<b>SOCIALE RESULTATER</b>						<b>Ændring</b>
Mindst udviklede lande, som har købt insulin i henhold til den differentierede prispolitik	36	35	35	32	23	(28%)
Donationer (mio. kr.) <sup>4</sup>	81	84	83	84	97	15%
Nye patentfamilier (prioritetsskabende ansøgninger)	80	65	77	93	77	(17%)
Medarbejdere (i alt) <sup>5</sup>	32.632	34.731	38.436	41.450	41.122	(1%)
Medarbejderomsætning	9,8%	9,1%	8,1%	9,0%	9,2%	
Kønsfordeling blandt ledere (mænd/kvinder)	63%/37%	61%/39%	61%/39%	60%/40%	59%/41%	
Relevante medarbejdere undervist i forretningsetik	99%	99%	97%	98%	98%	
Tilbagekaldelser af produkter	5	6	6	2	2	–
Ikke-godkendte inspektioner	0	1	0	0	0	–
Virksomhedens omdømme (skala 0–100)	N/A	N/A	82,9 <sup>6</sup>	80,8	82,4	
<b>LANGSIGTEDE SOCIALE MÅL</b>						<b>2015 mål</b>
Diabetikere, som anvender Novo Nordisks produkter (estimat i mio.)	20,9	22,8	24,3	24,4	26,8	40 i 2020
Efterlevelse af Novo Nordisk Way (skala 1–5)	4,3	4,3	4,4	4,3	4,3	4,0
<b>MILJØMÆSSIGE RESULTATER</b>						<b>Ændring</b>
Energiforbrug (1.000 GJ)	2.187	2.433	2.572	2.556	2.778	9%
Vandforbrug (1.000 m <sup>3</sup> )	2.136	2.475	2.685	2.959	3.131	6%
CO <sub>2</sub> -emissioner fra energiforbrug (1.000 tons)	94	122	125	120	107	(11%)
Organiske restprodukter (tons)	71.685	99.209	110.228	110.095	124.049	13%
Affald (tons)	18.695	19.213	20.387	30.720	34.715	13%
<b>LANGSIGTEDE MILJØMÆSSIGE MÅL</b>						<b>2015 mål</b>
Energiforbrug (i forhold til året før)	(2%)	11%	6%	(1%)	9%	Højest 4% <sup>7</sup>
Vandforbrug (i forhold til året før)	4%	16%	8%	10%	6%	Højest 4% <sup>7</sup>
<b>AKTIERELATEREDE NØGLETAL</b>						<b>Ændring</b>
Resultat pr. aktie/ADR (kr.) <sup>8</sup>	6,05	7,82	9,40	10,10	13,56	34%
Udvandet resultat pr. aktie/ADR (kr.) <sup>8</sup>	6,00	7,77	9,35	10,07	13,52	34%
Samlet antal aktier (mio.) pr. 31. december	2.900	2.800	2.750	2.650	2.600	(2%)
Egne aktier (mio. stk.) pr. 31. december	122	87	103	57	52	(9%)
Aktiekapital (mio. kr.)	580	560	550	530	520	(2%)
Indre værdi pr. aktie for koncernen (kr.) <sup>8</sup>	12,91	14,51	15,48	15,21	18,07	19%
Udbytte pr. aktie (kr.) <sup>8</sup>	2,80	3,60	4,50	5,00	6,40 <sup>9</sup>	28%
Udbytte i alt (mio. kr.)	7.742	9.715	11.866	12.905	16.230 <sup>9</sup>	26%
Aktietilbagekøb (mio. kr.)	10.839	12.162	13.989	14.728	17.229	17%
Lukkekurs på aktierne (kr.) <sup>8</sup>	132,00	183,30	198,80	260,30	399,90	54%

4. Donationer til Verdensdiabetesfonden og Novo Nordisk Haemophilia Foundation, som arbejder med at øge sundhedsplejekapaciteten i udviklingslande. 5. Data for 2015 er fraregnet medarbejdere i NNIT A/S, som blev frasolgt i 2015 (ca. 2.400 medarbejdere i NNIT A/S i 2014. Hvis disse medarbejdere havde været inkluderet, ville væksten have været 5%). 6. Tal for diabetikere og medarbejdere er ikke medtaget, da de ikke er tilgængelige. 7. 4% svarer til halvdelen af forretningsvæksten målt som øget salg beregnet i lokal valuta over en tre-årig periode. Der henvises til definition af mål på s.13. 8. Aktierelaterede nøgletal er beregnet ud fra en nominal værdi på 0,20 kr. pr. aktie. 9. Foreslået udbytte for året (endnu ikke deklareret).

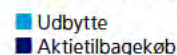
### MEDARBEJDERE (TOTAL)



### SALG OG CO<sub>2</sub>-EMISSIONER (2004 = INDEKS 100)



### UDBETALING TIL AKTIONÆRER





# VORES STRATEGI

Et skarpt fokus på fire behandlingsområder, fem kernekompetencer og et klart formål – alt sammen forankret i et værdibaseret ledelsessystem.

## NOVO NORDISKS STRATEGI

### STRATEGISKE FOKUSOMRÅDER

	Styrke lederskab indenfor <b>DIABETES</b>
	Etablere tilstedeværelse indenfor <b>FEDME</b>
	Forfølge lederskab indenfor <b>HÆMOFILI</b>
	Styrke lederskab indenfor <b>VÆKSTFORSTYRRELSE</b>

### KERNEKOMPETENCER

Design, formulering, udvikling og dosering af protein-baserede lægemidler	Indgående indsigt i sygdomme	Effektiv storskala-produktion af proteiner	Planlægning og gennemførelse af globale lanceringer af nye produkter	Etablering og fastholdelse af en førende position på vækstmarkeder
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### FORMÅL

**At skabe forandring for at bekæmpe diabetes og andre alvorlige kroniske sygdomme**

### Novo Nordisk Way

Siden Novo Nordisk blev grundlagt i Danmark for over 90 år siden, har virksomheden skabt forandringer indenfor diabetes. Dette langvarige engagement har givet virksomheden erfaringer og kompetencer, som i dag gør det muligt også at hjælpe med at bekæmpe andre alvorlige kroniske sygdomme: hæmofili, vækstforstyrrelser og fedme. I dag er Novo Nordisk en førende virksomhed in-

denfor diabetes, hæmofili og vækstforstyrrelser og godt på vej til også at etablere en tilstedeværelse indenfor fedme.

Det skarpe fokus på få udvalgte behandlingsområder er et centralt element i Novo Nordisks koncernstrategi. Et andet er fokuset på konstant udvikling af fem kernekompetencer, som er opbygget i Novo Nordisk gennem

årene, og som anvendes indenfor alle fire behandlingsområder. Det sidste element i strategien er det værdibaserede ledelsessystem, Novo Nordisk Way. Alt dette tjener det overordnede formål: at skabe forandring for at bekæmpe diabetes og andre alvorlige kroniske sygdomme. Læs mere om Novo Nordisk Way på [s. 18](#).

## DE FIRE STRATEGISKE FOKUSOMRÅDER

### 1. STYRKE LEDERSKAB INDENFOR DIABETES

Ifølge den internationale diabetesorganisation, International Diabetes Federation, lever 415 mio. mennesker i verden med diabetes, og ifølge beregningerne vil over 10% af verdens voksne befolkning – 642 mio. mennesker – have diabetes i 2040.

Det globale marked for produkter til diabetesbehandling beløber sig til 353 mia. kr., og heraf udgør Novo Nordisks produkter ca. 27%. Markedet er i de sidste 10 år vokset med omkring 10% om året, og alt tyder på, at væksten vil fortsætte som følge af det stadig stigende antal diabetikere og beho-

vet for bedre lægemidler. Af det globale marked udgør insulin 56%, diabetesprodukter i tabletform 37% og GLP-1-produkter 7% opgjort i værdi.

Diabetesbehandling er langt det største af Novo Nordisks forretningsområder, og diabetesprodukter tegner sig for 79% af virksomhedens samlede salg. I 2007 blev det besluttet at koncentrere indsatsen indenfor diabetesbehandling om proteinbaserede produkter som insulin og GLP-1. Derfor er Novo Nordisk i dag førende indenfor begge segmenter med en markedsandel på henholdsvis 40% og 75% opgjort i værdi.

Det er Novo Nordisks ambition at styrke sin førende position yderligere indenfor insulin

og GLP-1. Nøglen til at indfri denne ambition er den nye generation af insulinprodukter, Tresiba®, Xultophy® og Ryzodeg®, og GLP-1-analogen Victoza® til dosering én gang dagligt. Alle disse produkter er blevet eller er på vej til at blive lanceret i brugervenlige injektionssystemer som FlexTouch®. Vigtige projekter i forsknings- og udviklingspipelinen tæller bl.a. en ny, hurtigerevirkende formulering af insulin aspart, en GLP-1-analog, semaglutid, til injektion én gang om ugen og en tabletversion af semaglutid til dosering én gang om dagen.

Innovative biologiske lægemidler som disse er Novo Nordisks vigtigste bidrag til at bekæmpe diabetes. Men virksomheden er klar over, at produkterne kun udgør en del af



indsatsen, for der skal mere end medicin til at ændre diabetes. Derfor er Novo Nordisk gennem Changing Diabetes® involveret i andre aktiviteter, som har til formål at øge bevidstheden om type 2-diabetes og fremme en sund livsstil og de samfundsmæssige ændringer, der er nødvendige for at bremse den alarmerende vækst i antallet af nye tilfælde af sygdommen. Et nyligt eksempel er Cities Changing Diabetes, som er et globalt initiativ til bekæmpelse af diabetes i verdens storbyer. Læs mere om:

Novo Nordisks portefølje af produkter under udvikling, s. 20  
GLP-1-produkter, s. 26  
Kampen mod diabetes, s. 22  
Cities Changing Diabetes, s. 30.



## 2. ETABLERE TILSTEDEVÆRELSE INDENFOR FEDME

Fedme er kendt som en væsentlig risikofaktor for udvikling af alvorlige sygdomme som type 2-diabetes, og derfor er det et naturligt nyt behandlingsområde for Novo Nordisk. Fedme har nået et pandemisk omfang med over 600 mio. voksne, der er klinisk svært overvægtige (dvs. har et BMI på 30 eller derover).<sup>2</sup> Der findes i dag kun få medicinske behandlingsmuligheder, og tilskudsmulighederne til disse lægemidler er begrænsede. Det globale marked for lægemidler til behandling af fedme har i dag en værdi af ca. 10 mia. kr.

I 2015 gjorde Novo Nordisk sin entre på markedet for fedmebehandling med Saxenda® (liraglutid 3 mg), som blev lanceret i USA i april, og som nu også markedsføres i Danmark og Canada. Det er Novo Nordisks ambition at etablere en langsigtet tilstedeværelse på markedet for fedmebehandling, og Saxenda® ses som det første af flere skridt på vejen mod dette mål.

Læs mere om Novo Nordisks strategi for fedmebehandling på s. 28.



## 3. FORFØLGE LEDERSKAB INDENFOR HÆMOFILI

Hæmofili er en arvelig eller erhvervet koagulationssygdom, der forhindrer blodet i at størkne. Det anslås, at omkring 420.000 mennesker på verdensplan lever med svær eller moderat hæmofili.<sup>3</sup> Det globale marked for lægemidler til behandling af hæmofili har en værdi af omkring 75 mia. kr. og er i de senere år vokset med ca. 5% om året.<sup>5</sup>

Novo Nordisk gik ind i markedet for hæmofilibehandling i 1996 med NovoSeven® til behandling af mennesker med hæmofili, som danner antistoffer mod gængse hæmofili præparater. Lanceringen af NovoEight® i

2014 var en vigtig milepæl i virksomhedens ambition om at bevæge sig fra denne niche til hovedsegmentet, hæmofili A. I januar 2016 ansøgte Novo Nordisk om EU-godkendelse af en langtidsvirkende faktor IX til behandling af hæmofili B. Derudover har virksomheden en langtidsvirkende koagulationsfaktor til behandling af hæmofili A i fase 3 af det kliniske udviklingsforløb. Det er Novo Nordisks ambition at opnå en førerposition indenfor både hæmofili A og hæmofili B. Læs mere om Novo Nordisks aktiviteter indenfor hæmofili på s. 32.



## 4. STYRKE LEDERSKAB INDENFOR VÆKSTFORSTYRELSE

Novo Nordisk har været aktiv indenfor behandling af væksthormonmangel i næsten fire årtier. Det globale marked for behandling af væksthormonmangel skønnes at have en værdi af 16 mia. kr. Novo Nordisks væksthormonprodukt, Norditropin®, er global markedsleder med en markedsandel på 35% opgjort i værdi. Det er virksomhedens ambition at styrke sit lederskab på markedet for væksthormoner. Et nøgleprojekt i denne forbindelse er Novo Nordisks langtidsvirkende væksthormonprodukt, der er i fase 3 af det kliniske udviklingsforløb.

### DESIGN, FORMULERING, UDVIKLING OG DOSERING AF PROTEINBASEDE LÆGEMIDLER

#### 1920

- Nordisk Insulinlaboratorium (1923) og Novo Terapeutisk Laboratorium (1925) grundlægges.

#### 1940

- Nordisk udvikler isophan insulin (NPH), en neutral insulin med forlænget virkning.

#### 1980

- NovoPen® lanceres – et injektionssystem i samme format som en fyldepen.
- Novo starter produktion af human insulin ved hjælp af genmodificerede gærceller.
- Nordisk markedsfører genmodificeret humant væksthormon, Norditropin®.

#### 1990

- NovoSeven® lanceres til behandling af hæmofili patienter med antistofreaktion.
- NovoRapid® markedsføres – virksomhedens første moderne insulinpræparat.

#### 2000

- Victoza® lanceres – en human GLP-1-analog til behandling af type 2-diabetes én gang dagligt.

#### 2010

- Tresiba® lanceres – det første produkt i en ny generation af insulin.

## FEM KERNEKOMPETENCER

Novo Nordisks kernekompetencer er udviklet og optimeret over mange år.

### DESIGN, FORMULERING, UDVIKLING OG DOSERING AF PROTEINBASEDE LÆGEMIDLER

Novo Nordisks forskere er blandt verdens bedste indenfor formuleringsteknologi og proteinmodifikation, ekspression og dosering, og det sætter virksomheden i stand til løbende at forbedre egenskaberne i terapeutiske proteiner som insulin og GLP-1 samt de tilhørende doseringssystemer. Novo Nordisk har for nylig udviklet nye kompetencer indenfor formulering af proteinbaserede produkter i tableform.

### INDGÅENDE INDSIGT I SYGDOMMENE

Novo Nordisk har i årtier arbejdet for at opfylde diabetikeres medicinske behov og har derved opnået en indgående indsigt i, hvad det betyder at leve med denne sygdom. Sammen med stærke relationer til og et omfattende samarbejde med eksterne forskere og klinikere giver denne indsigt et solidt grundlag for virksomhedens forsknings-, udviklings- og markedsføringsaktiviteter.

### EFFEKTIV STORSKALAPRODUKTION AF PROTEINER

En omkostningseffektiv global produktionsinfrastruktur af høj kvalitet er forudsætningen for at kunne konkurrere effektivt på et stadig mere konkurrencepræget lægemiddelmarked. Novo Nordisk er verdens største producent af insulin og har udviklet sin ekspertise indenfor fremstilling af proteinbaserede lægemidler siden 1923. Læs mere om nye investeringer i produktionen på s. 38.

### PLANLÆGNING OG GENNEMFØRELSE AF GLOBALE LANCERINGER AF NYE PRODUKTER

Som følge af de høje og stigende omkostninger, der knytter sig til udvikling og lancering af nye lægemidler, lanceres de fleste produkter globalt over en relativt kort periode. Dermed opnår man et rimeligt tidsrum, inden patentet udløber. Gennem den globale lancering af Victoza® har Novo Nordisk optimeret denne kompetence, som nu udnyttes ved lanceringen af nye produkter som Tresiba® og NovoEight®.

### ETABLERING OG FASTHOLDELSE AF EN FØRENDE POSITION PÅ VÆKSTMARKEDER

Mange års erfaring har givet Novo Nordisk indsigt i behovene på nye vækstmarkeder, efterhånden som deres sundhedssystemer udvikler sig. Det har altid været virksomhedens strategi at etablere en lokal organisation på et tidligt tidspunkt og derefter lade organisationen vokse organisk, efterhånden som markedet udvikler sig. Det har gjort det muligt for Novo Nordisk at opbygge en højt kvalificeret salgstyrke, langsigtede relationer og en blivende tilstedeværelse på vækstmarkederne.



# NOVO NORDISK WAY

Gennem sin måde at drive forretning søger Novo Nordisk at skabe værdi sammen med virksomhedens interessenter.

Novo Nordisks værdibaserede ledelsessystem, Novo Nordisk Way, er et centralt element i virksomhedens koncernstrategi. "Det beskriver, hvem vi er, hvor vi vil hen, og hvilke værdier der kendetegner vores virksomhed," forklarer administrerende direktør Lars Rebie Sørensen.

Han mener, at det er et effektivt grundlag for at lede en hurtigt voksende global organisation som Novo Nordisk: "Vi kan jo ikke have nedskrevne regler for alt, hvad vi gør i virksomheden. I mange tilfælde må vi have tillid til, at vores medarbejdere træffer de rigtige beslutninger, og netop derfor er Novo Nordisk Way så vigtig. Den sætter kursen og gælder for alle medarbejdere i Novo Nordisk – uanset deres job, og hvor de arbejder. Den er et løfte, vi giver til hinanden og vores eksterne interessenter."

Lars Rebie Sørensen nævner nogle eksempler på, hvordan Novo Nordisk sikrer, at Novo Nordisk Way kommer helt ind under huden på den enkelte medarbejder, fra klassiske tiltag som introduktionsprogrammer for medarbejdere og ledertræning til såkaldte faciliteringer, som er noget unikt for Novo Nordisk. Et facilitatorteam bestående af medarbejdere med solid ledelseserfaring og grundigt kendskab til virksomheden rejser rundt i den globale organisation og interviewer medarbejdere, ledere og interne interessenter i de enheder, de faciliterer. De gennemgår også dokumenter og lokal forretningspraksis. På det grundlag vurderes det, i hvor høj grad den enkelte enhed arbejder i overensstemmelse med Novo Nordisk Way.

I 1923 indledte vores danske grundlæggere en rejse for at ændre diabetes. I dag er vi tusindvis af medarbejdere over hele verden, som har engagementet og kompetencerne til at fortsætte denne rejse med det formål at forebygge, behandle og på længere sigt finde en kur mod diabetes.

- Vores ambition er at styrke vores førende position indenfor diabetes.
- Vi vil ændre mulighederne indenfor hæmofili og andre alvorlige kroniske sygdomme, hvor vi kan gøre en forskel.
- Vores primære fokus er at forske i og udvikle innovative biologiske lægemidler og gøre dem tilgængelige for patienter overalt i verden.
- Ved at sikre forretningens vækst og levere konkurrencedygtige økonomiske resultater kan vi hjælpe patienter til at få et bedre liv, tilbyde et attraktivt afkast til vores aktionærer og bidrage til de fællesskaber, vi indgår i.
- Vi går aldrig på kompromis med kvalitet og forretningsetik.
- Vores forretningsfilosofi er at sikre balance mellem økonomiske, sociale og miljømæssige hensyn – vi kalder det den tredobbelte bundlinje.
- Vi er åbne og ærlige, ambitiøse og ansvarlige, og vi behandler alle med respekt.
- Vi giver vores medarbejdere mulighed for at udnytte deres potentiale.

Hver eneste dag skal vi træffe svære valg og hele tiden tage hensyn til, hvad der i det lange løb er bedst for patienter, medarbejdere og aktionærer.

Vi kalder det Novo Nordisk Way.



Faciliteringerne munder ud i en rapport, der vurderer enhedens arbejde i forhold til Novo Nordisk Way, og en handlingsplan for yderligere forbedringer, som fastlægges i samarbejde med den lokale ledelse. Facilitatorerne kan identificere områder, der kan forbedres, men kan også finde eksempler på bedste praksis, der kan deles med resten af virksomheden. Både koncerndirektionen og bestyrelsen modtager regelmæssigt rapporter om, i hvor høj grad organisationen lever op til Novo Nordisk Way.

#### DEN TREDOBBELTE BUNDLINJE

Et vigtigt element i Novo Nordisk Way er princippet om den tredobbelte bundlinje, som blev skrevet ind i virksomhedens vedtægter på generalforsamlingen i 2004. Her står, at Novo

tilbyder en sikker arbejdsplads og udfordringer for den enkelte, kan medarbejderne realisere deres potentiale. Når vi tilbyder lægemidler til overkommelige priser i verdens fattigste lande, styrker vi vores forretning og vores omdømme. Og når vi bidrager til de samfund, vi opererer i, opbygger vi tillid hos vores interessenter," tilføjer han.

#### FÆLLES VÆRDISKABELSE

Lars Rebien Sørensen er overbevist om, at Novo Nordisks langsigtede succes afhænger af virksomhedens evne til at skabe både økonomisk og samfundsmæssig udvikling: "Hvis ikke man kan se, at vi skaber værdi for de lokalsamfund, vi befinder os i, og for de lande, hvor vi driver forretning, opnår vi ikke succes i længden."

Bidrag til lokalsamfund måles ofte økonomisk, f.eks. ud fra jobskabelse og skattebetalinger. Novo Nordisk betaler skat i alle de jurisdiktioner, hvor virksomheden er til stede, og har den politik 'at forsøge at opnå et konkurrencedygtigt skatteniveau på en ansvarlig måde', der afspejler et konstant fokus på værdiskabelse uden at gå på kompromis med forretningsetik. For at styre skattemæssige usikkerheder indgår Novo Nordisk flerårige såkaldte Advance Pricing Agreements i de vigtigste jurisdiktioner, og skattemyndighederne informeres om disse ordninger.

Udover gennem forretningstransaktioner kan der også skabes værdi på andre måder. Virksomheder kan skabe fælles værdi ved at udvikle løsninger til gavn for samfundet og derved samtidig tjene penge på en bæredygtig måde. Et eksempel er i Kalundborg, hvor Novo Nordisks største produktionsanlæg ligger. Her arbejder virksomheden sammen med lokale interessenter om at fremme bæredygtig udvikling i kommunen. Målet er at sikre, at Kalundborg udvikler sig til et endnu mere attraktivt sted at leve og arbejde og et sted, hvor erhvervslivet blomstrer.

Novo Nordisks initiativer på nationalt plan sigter mod at skabe værdi for samfundet, f.eks. ved at opbygge kompetencer indenfor sundhedssystemet og forbedre adgangen til behandling. Når det lykkes, styrker det virksomhedens relationer til interessenterne, dens omdømme og i sidste ende dens chancer for at opnå forretningsmæssig succes i det pågældende land.

Et eksempel på denne filosofi kan ses i Algeriet, som er et af Novo Nordisks hurtigst voksende markeder. Her har virksomheden i mange år haft et succesrigt partnerskab med sundhedsministeriet. Resultaterne af dette partnerskab omfatter en Changing Diabetes® mobil-klinik, som styrker de lokale behandleres kompetencer og sikrer adgang til diabetesscreening og behandling for underprivilegerede befolkningsgrupper, samt det algeriske Changing Diabetes® Barometer, som måler fremskridt i kampen mod diabetes.

#### FORANDRING PÅ GLOBALT PLAN

Novo Nordisk deltager proaktivt i dialogen om bæredygtig udvikling med relevante partnere i hele verden. Siden Rio+20 Konferencen i 2012 har virksomheden deltaget i processen frem til vedtagelsen af FN's nye verdensmål for bæredygtig udvikling (Sustainable Development Goals (SDG) eller Global Goals for Sustainable Development).

"De globale bæredygtigheds mål er vigtige for Novo Nordisk, især fordi ikke-smitsomme sygdomme – som også omfatter diabetes – udtrykkeligt er omtalt i målet om at sikre 'sundhed og trivsel for alle i alle aldre', siger Lars Rebien Sørensen. "FN's bæredygtigheds mål giver os en platform, som vi kan bruge til at engagere lokale, nationale og internationale interessenter i en dialog om diabetes og bæredygtig udvikling, men også om mange andre emner, som er vigtige for os."

# NOVO NORDISK WAY

Nordisk vil "tilstræbe at gennemføre sine aktiviteter på en økonomisk, miljømæssigt og socialt ansvarlig måde".

Den tredobbelte bundlinje danner rammen for Novo Nordisks langsigtede strategi om at drive en bæredygtig forretning. Den forpligter alle i virksomheden til altid at overveje, hvordan beslutninger og handlinger kan påvirke mennesker, samfund og miljø. Målet er at sikre langsigtet lønsomhed ved at begrænse risici forbundet med virksomhedens forretningsaktiviteter og maksimere det positive bidrag til samfundet fra Novo Nordisks globale aktiviteter.

Lars Rebien Sørensen understreger, at princippet om den tredobbelte bundlinje handler om at maksimere værdien af virksomheden på langt sigt. "Fordi," som han sagde i et nyligt interview med *Harvard Business Review*, "sociale og miljømæssige problemer bliver til økonomiske problemer på længere sigt. Det er der ikke noget hokusfokus i. Og Novo Nordisk er delvist ejet af en dansk fond, der forpligter os til at maksimere værdien af virksomheden på langt sigt."

Når vi omlægger produktionen til vedvarende energi, reducerer vi vores omkostninger. Når vi



# OVERSIGT OVER UDVIKLINGSPROJEKTER

## DIABETES- OG FEDMEBEHANDLING

Præparat	Indikation	Beskrivelse	Fase 1	Fase 2	Fase 3	Registre- ring/god- kendelse
<b>Diabetes</b>						
<b>Xultophy®</b> NN9068	Type 2- diabetes	En kombination af insulin degludec og liraglutid til dosering én gang dagligt i én samlet injektion. Godkendt i Europa.				
<b>Hurtigerevirkende insulin aspart</b> NN1218	Type 1- og 2-diabetes	En ny formulering af insulin aspart, der har til formål at opnå en hurtigere indsættende virkning, med potentiale for større doseringsfleksibilitet.				
<b>Semaglutid</b> NN9535	Type 2- diabetes	En GLP-1-analog til dosering én gang ugentligt, der har til formål at opnå GLP-1-analogens kliniske fordele med færre injektioner ved behandling af type 2-diabetes.				
<b>OG2175C</b> NN9924	Type 2- diabetes	En langtidsvirkende oral GLP-1-analog med potentiale som tabletbehandling én gang dagligt ved behandling af type 2-diabetes.				
<b>OI338GT</b> NN1953	Type 1- og 2-diabetes	En langtidsvirkende basalinsulinanalog, der har til formål at opnå basalinsulinanalogens kliniske fordele taget som tabletbehandling én gang dagligt.				
<b>Anti-IL-21 T1D</b> NN9828	Type 1- diabetes	En behandling med potentiale til at bevare betacellefunktionen hos nydiagnosticerede type 1-diabetikere.				
<b>Dobbeltagonist</b> NN9709	Type 2- diabetes	En GLP-1-/GIP-dobbeltagonist med potentiale til dosering én gang dagligt ved behandling af type 2-diabetes.				
<b>LAI287</b> NN1436	Type 1- og 2-diabetes	En langtidsvirkende basalinsulinanalog med potentiale til dosering én gang ugentligt.				
<b>Mealtime</b> NN1406	Type 1- og 2-diabetes	En leverpræferentiel måltidsinsulinanalog.				
<b>OI320GT</b> NN1957	Type 2- diabetes	En langtidsvirkende basalinsulin i en oral formulering med potentiale som tabletbehandling én gang dagligt.				
<b>PYY 1562</b> NN9748	Type 2- diabetes	Et appetitregulerende hormon, peptid tyrosin, til behandling af diabetes.				

### Fase 1



Afprøvning på et begrænset antal (normalt 10–100) raske frivillige (kan også være patienter) for at undersøge, hvordan præparatet optages, fordeles og elimineres i kroppen, og fastslå den maksimale tålte dosis.

### Fase 3



Studier med deltagelse af et stort antal patienter (normalt 1.000–3.000), hvor præparatet sammenlignes med et almindeligt anvendt lægemiddel eller placebo for at vurdere dets sikkerhed og virkning. Fase 3a omfatter studier, der gennemføres, efter at der er påvist effekt, men før indsendelse af registreringsansøgning. Fase 3b omfatter kliniske studier, der afsluttes under og efter indsendelse af registreringsansøgning. Indenfor små terapiområder som hæmofili kan de regulatoriske vejledninger tillade design af bekræftende studier med bare én forsøgsarm eller studier, der sammenligner med f.eks. historisk kontrol i stedet for eksisterende behandling eller placebo.

### Fase 2




















Præparatet afprøves i forskellige doseringer på en større gruppe patienter (normalt 100–1.000) for at undersøge dets effekt på den pågældende sygdom samt dets bivirkninger. I fase 2 gennemføres kliniske studier for at vurdere virkning (og sikkerhed) i nærmere angivne grupper af patienter. Fase 2-studierne munder ud i clinical proof of concept (klinisk bevis for effekt) og valg af dosis til vurdering i fase 3.

### Registrering/godkendelse



Den fase, hvor registreringsansøgning er indsendt til de relevante myndigheder. Produkter opført her er p.t. under behandling hos registreringsmyndighederne i mindst ét af de tre markeder: USA, EU og Japan.



Præparat	Indikation	Beskrivelse	Fase 1	Fase 2	Fase 3	Registre- ring/god- kendelse
 <b>Fedme</b>						
<b>Semaglutid</b> NN9536	Fedme	En langtidsvirkende GLP-1-analog med potentiale til dosering én gang dagligt ved behandling af fedme.				
<b>AM833</b> NN9838	Fedme	En ny amylinanalog med potentiale til dosering én gang ugentligt ved behandling af fedme.				
<b>G530L</b> NN9030	Fedme	En ny glukagonanalog, som i kombination med liraglutid har potentiale til behandling af fedme.				
<b>PYY 1562</b> NN9747	Fedme	Et appetitregulerende hormon, peptid tyrosin, som alene eller i kombination med semaglutid har potentiale til behandling af fedme.				

## BIOPHARMACEUTICALS

 <b>Hæmofili</b>						
<b>N9-GP</b> NN7999	Hæmofili B	En glykopeglyleret langtidsvirkende rekombinant koagulationsfaktor IX, der har potentiale til forebyggelse og behandling af blødninger.				
<b>N8-GP</b> NN7088	Hæmofili A	En glykopeglyleret langtidsvirkende rekombinant koagulationsfaktor VIII, der har potentiale til forebyggelse og behandling af blødninger.				
<b>Concizumab</b> NN7415	Hæmofili A og B	Et monoklonalt antistof mod Tissue Factor Pathway Inhibitor (TFPI), der har potentiale til forebyggelse af blødninger efter injektion i underhuden.				
 <b>Vækstforstyrrelser</b>						
<b>Somapacitan</b> NN8640	Vækstforstyrrelser	Et langtidsvirkende humant væksthormon, der potentielt kan injiceres én gang ugentligt.				

Læs mere på [novonordisk.com/investors](http://novonordisk.com/investors) og [clinicaltrials.gov](http://clinicaltrials.gov).

## VIGTIGE MILEPÆLE 2016

<b>Tresiba®</b>	Resultater fra studierne SWITCH og DEVOTE
<b>Victoza®</b>	Resultater fra LEADER-studiet
<b>Semaglutid</b>	Afslutning af fase 3a
<b>Oral semaglutid</b>	Påbegyndelse af fase 3a
<b>Xultophy®</b>	Forventet tilbagemelding vedrørende registreringsansøgning i USA
<b>Hurtigerevirkende insulin aspart</b>	Forventet tilbagemelding vedrørende registreringsansøgning i USA
<b>N9-GP</b>	Indsendelse af registreringsansøgning i USA



193 MIO. MENNESKER VED  
IKKE, AT DE HAR DIABETES

# ER DU ÉN AF DEM?

Tidlig diagnose og optimal blodsukkerregulering  
er altafgørende for at undgå diabetiske  
senkomplikationer.

International Diabetes Federation (IDF) skønner, at knap halvdelen af de 415 mio. mennesker i verden, der lever med diabetes, ikke har fået en diagnose.<sup>1</sup> Det betyder, at omkring 193 mio. mennesker går rundt uden at vide noget om de skader, der sker på kroppen. Jo længere tid der går, inden diagnosen stilles, jo mere sandsynligt er det, at der opstår komplikationer – herunder skader på øjne, nyrer, nerver og hjerte. Mennesker med udiagnosticeret diabetes har desuden væsentligt højere risiko for at få slagtilfælde og hjerte-kar-sygdom.

Foruroligende er det også, at op mod 50% af de diabetikere, som deltog i diabetesundersøgelsen UK Prospective Diabetes Study (UKPDS), allerede havde komplikationer på det tidspunkt, hvor deres diagnose blev stillet.<sup>2</sup> Da det nu vurderes, at næsten 642 mio. mennesker vil have diabetes i 2040<sup>3</sup>, er antallet af mennesker med udiagnosticeret diabetes stærkt bekymrende.

"Traditionelt går folk kun til læge, når de har et problem – og det betyder, at når de endelig får en diagnose, er der allerede sket en del skader, da man kan have diabetes i lang tid, før man mærker symptomer fra komplikationer," forklarer professor Stephen Gough, som er senior principal clinical scientist i Novo Nordisk og tidligere afdelingsleder ved Oxford Centre for Diabetes Endocrinology & Metabolism (OCDEM). "Hvis vi skal reducere diabetesbyrden, må vi stille diagnosen tidligere. Tidsfaktoren er afgørende."

## RISIKOBASERET SCREENING

Den såkaldte Rule of Halves illustrerer, at kun halvdelen af de mange millioner mennesker med diabetes har fået en diagnose (se grafik). Det første – og måske mest afgørende – skridt mod at bryde denne regel er derfor at sikre, at diagnosen stilles på et tidligere tidspunkt.

Dr. Shaukat Sadikot, præsident for IDF, understreger betydningen af en øget diagnosticeringsindsats: "En bredere screening ville gøre det muligt for os at opdage diabetes på et tidligere sygdomsstadie, hvor det er lettere at opnå god regulering med en mindre intensiv behandling. Desværre er det umuligt at screene universelt på grund af de enorme befolkningsgrupper og heraf følgende udgifter."

Der findes dog et antal velkendte risikofaktorer for type 2-diabetes (se boks). Hvis man kun screener mennesker, der har en eller flere af disse risikofaktorer, ville opgaven i mange lande være overkommelig.

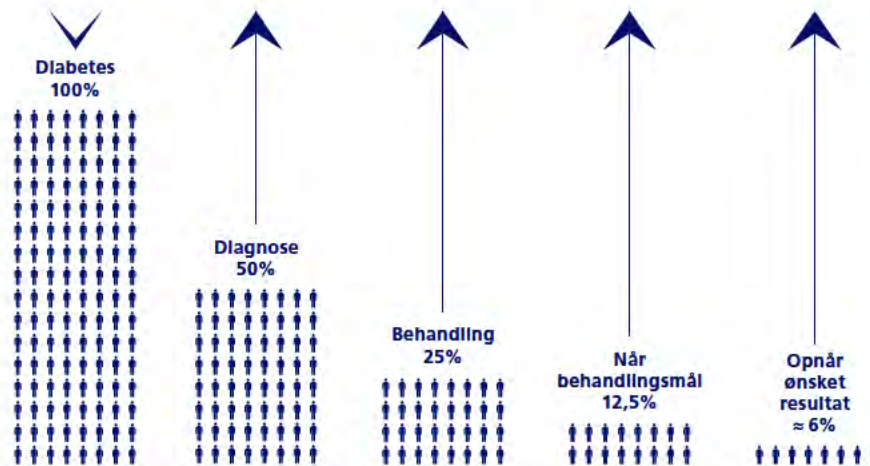
"Screening af mennesker med forhøjet risiko for diabetes, inden de får symptomer, vil have stor betydning for behandlingsresultaterne," pointerer Dr. Sadikot. "Vi ville ikke kun kunne stille en diagnose på et



## 'RULE OF HALVES'

IFØLGE RULE OF HALVES<sup>7</sup> LEVER KUN OMKRING 6% AF ALLE DIABETIKERE UDEN DIABETESRELATEREDE KOMPLIKATIONER.\*

Af anslået 415 mio. mennesker med diabetes i verden ... får omkring 50% stillet en diagnose\*... af disse får omkring 50% behandling\*... af disse når omkring 50% deres behandlingsmål\*\*... af disse lever omkring 6% et liv uden diabetesrelaterede komplikationer.



\* De faktiske procenttal for diagnose, behandling, mål og behandlingsresultater varierer fra land til land.  
\*\* Dvs. anbefalede blodsukkerniveauer.

tidligere stadie, hvor en rutinebehandling ville have god effekt, men også være i stand til at hjælpe de mennesker, der står på tærsklen til diabetes – folk, som f.eks. har nedsat glukosetolerance – hvor man gennem livsstilsændringer kunne udsætte sygdommens opståen.”

Novo Nordisk arbejder gennem Changing Diabetes<sup>®</sup> (se boks) for tidligere diagnosticering gennem risikobaseret screening, så faren for senkomplikationer kan reduceres, og diabetikere kan leve et liv med så få begrænsninger som muligt.

### OPTIMAL BEHANDLING

'Rule of Halves' viser imidlertid også, at selvom der bliver stillet en diagnose, er det kun ca. 12,5%, der får en behandling, som sætter dem i stand til at nå deres behandlingsmål. Det betyder, at kun ganske få er helt fri for komplikationer af nogen art.

Professor Stephen Gough forklarer, at diabetikere ofte kun får den simpleste behandling eller en behandling, der ikke er intensiv nok til, at de kan nå det optimale mål i forhold til sygdommens stadie: "Næste skridt i behandlingen bliver ikke taget, før blodsukkeret når op på et uacceptabelt niveau.

Ideelt set betyder optimal regulering, at blodsukker, lipidprofiler og blodtryk holdes på samme niveau som hos en person, der ikke har diabetes. Det kræver, at behandlingen påbegyndes tidligere, og at den konstant optimeres. Der er dog mange, der måske vælger at holde op med at tage

medicinen, fordi den stramme regulering kan føre til flere tilfælde af hypoglykæmi og vægtstigning. Her er det, at de nye avancerede behandlinger, som tolereres bedre, kommer ind. De er udviklet til at minimere nogle af de uønskede virkninger ved optimal regulering og er derfor lettere at bruge til at opnå og fastholde behandlingsmålene.”

### DIABETESBYRDEN

Diabetespandemien er en alvorlig byrde for mennesker og samfund. Ifølge IDF spillede diabetes en rolle i 5 mio. dødsfald og medførte sundhedsudgifter på 673 mia. amerikanske dollars i 2015, svarende til 11,6% af de samlede sundhedsudgifter globalt.<sup>1</sup> Hertil kommer effekten af nedsat beskæftigelse og produktivitet, som tilsammen lægger en væsentlig økonomisk byrde på diabetikere, deres familier og samfundet. Det kan dokumenteres, at tidlig diagnose, endda før symptomerne viser sig, og optimal regulering fører til færre og mindre alvorlige komplikationer samt en højere forventet levealder.

Undersøgelser har vist, at screening og optimal behandling er omkostningseffektive foranstaltninger, for selvom omkostningerne for sundhedssystemerne stiger på kort sigt, falder de betydeligt på langt sigt.<sup>9,10,11</sup> Resultaterne tyder desuden på, at samfundet på langt sigt får indsatsen tre gange igen i forhold til den oprindelige investering i behandlingsoptimering.<sup>12</sup> Bedre behandling er derfor ikke blot omkostningseffektiv, men undertiden ligefrem omkostningsbesparende – og kan i sidste ende også redde liv.

## RISIKOFAKTORER FOR TYPE 2-DIABETES<sup>8</sup>

Risikofaktorer for type 2-diabetes omfatter:

- Andre familiemedlemmer med diabetes
- Overvægt
- Usunde spisevaner
- Fysisk inaktivitet
- Stigende alder
- Højt blodtryk
- Etnicitet
- Nedsat glukosetolerance
- Har haft svangerskabsdiabetes
- Dårlig ernæring under graviditet.

## CHANGING DIABETES<sup>®</sup>

Changing Diabetes<sup>®</sup> er Novo Nordisks svar på den globale diabetesudfordring. Virksomhedens vigtigste bidrag er at forske i og udvikle bedre biologiske lægemidler, men det kræver mere end medicin at bekæmpe diabetes og hjælpe diabetikere til at leve et liv med så få begrænsninger som muligt. Changing Diabetes<sup>®</sup> adresserer de største udekede behov og fokuserer på tre prioriteter: Flere diabetikere skal diagnosticeres tidligere. Flere diabetikere skal opnå optimal regulering. Og diabetes skal være på dagsordenen hos lederne af verdens byer, hvor to ud af tre med diabetes bor i dag. Læs mere på **s. 30**. Mere information kan findes på **novonordisk.com/about-novo-nordisk/changing-diabetes**.

## MULIGE KOMPLIKATIONER AF UBEHANDLET DIABETES



### SLAGTILFÆLDE

Op til fire gange større sandsynlighed for slagtilfælde.



### BLINDHED

Diabetes er en af hovedårsagerne til blindhed.



### HJERTEANFALD

Tre gange større sandsynlighed for hjerteranfald og op til fire gange større sandsynlighed for hjertesygdom.



### TOTALT NYRESVIGT

Tre gange større sandsynlighed for totalt nyresvigt.



### AMPUTATION

En af hovedårsagerne til benamputationer, der ikke skyldes kvæstelser.







"Hos Novo Nordisk tror vi grundlæggende på, at fremtidens diabetesbehandling ikke bare bliver 'mere af samme skuffe'. Det bliver noget nyt, innovativt og spændende."

**PETER KURTZHALS**  
DIREKTØR FOR GLOBAL RESEARCH



## Novo Nordisks forskere arbejder på nye proteinbaserede lægemidler, som kan få stor betydning for diabetesbehandlingen.

Siden opdagelsen af insulin i 1922 er der sket mange fremskridt indenfor diabetesbehandling. Men det ultimative mål om nemt og bekvemt at kunne holde blodsukkeret i ave på et normalt niveau – uden risiko for f.eks. hypoglykæmi eller vægtstigning – er endnu ikke nået.

"Vi er ikke i mål endnu. Der er stadig udfordringer, der skal overvindes," siger Peter Kurtzhals, direktør for Global Research i Novo Nordisk. "Det er derfor, hundredvis af verdens dygtigste forskere i vores avancerede forskningscentre i Danmark, USA og Kina arbejder på at gøre det, vi er bedst til: at finde nye og bedre proteinbaserede lægemidler. Vi er midt i en rigtig spændende tid lige nu med mange lovende lægemiddeldokumenter til nye, innovative diabeteslægemidler."

### INSULIN: DEN ULTIMATIVE BEHANDLING

For mange diabetikere er insulin stadig den ultimative behandling<sup>1</sup> – men der kan gøres meget mere for at forbedre insulinbehandlingen, både med hensyn til virkning og bekvemmelighed. Det ved diabetikerne alt om. Den amerikanske studerende og svømmer Tanner Barton har type 1-diabetes, og i en patientworkshop i Seattle i 2015 fortalte han nogle af Novo Nordisks forskere om sine

ønsker og tanker. "Jeg synes, det er rigtig godt, at diabetikere går i dialog med lægemiddelvirkningerne. Det kan sikre, at behandlingen ikke bare retter sig mod det fysiske problem, men også mod den psykosociale byrde, der er forbundet med sygdommen. Jeg er sikker på, at der er mange spændende lægemidler, som venter ude i horisonten, men det er vigtigt, at der bliver sat fokus på præcision i behandlingen, så vi kan komme angsten omkring blodsukkerregulering til livs," siger han. "Jeg vil gerne kunne deltage i en svømmekonkurrence uden at være bekymret for mit blodsukker."

Novo Nordisk er i gang med at udvikle dels en hurtigerevirkende insulin og dels langtidsvirkende insuliner til dosering én gang om ugen med det formål bedre at kunne imødekomme diabetikernes behov.

Mange diabetikere vil nok være glade for at kunne nøjes med en enkelt insulininjektion om ugen, men andre vil måske helst være fri for overhovedet at skulle tage injektioner. Derfor gik Novo Nordisk for nogle år siden i gang med at udvikle insulin i tabletform. Men det er langt fra nemt, fortæller Peter Kurtzhals. "Oral insulin, som vi kalder det, er en kolossal udfordring. Vi er nemlig nødt til at finde en måde at beskytte insulinmolekylet på, så det ikke bliver fordøjet i tarmen, og dernæst finde en måde, hvorpå dette store proteinmolekyle kan passere ind i blodbanen i de rette mængder og forblive i blodet i det rette tidsrum. Vi har dog store forhåbninger, og vi er rigtig glade for, at det nu er lykkedes at bringe oral insulin ind i klinisk fase 2-udvikling."

Med henblik på at opnå øget viden og ekspertise indenfor proteindoseringssystemer har Novo Nordisk for nylig indgået et treårigt forskningssamarbejde med Langer Laboratory ved Massachusetts Institute of Technology. Peter Kurtzhals har store forhåbninger til samarbejdet: "Professor Robert Langer og hans team har opnået fænomenale resultater med hensyn til at skabe innovation i krydsfeltet mellem terapeutiske proteiner og teknologi. De er nogle af verdens førende eksperter i at finde nye tilgange til at transportere peptider og proteiner over komplekse barrierer i kroppen som f.eks. tarmen. Dette samarbejde understreger vores engagement i oral behandling, og vi er allerede i gang med at forske i den næste generation af oral insulin." Dette partnerskab er endnu et eksempel på en aftale om forskningssam-

arbejde med en højprofileret akademisk institution, som Novo Nordisk har indgået for nylig. Andre eksempler er Oxford University og Karolinska Institutet i Stockholm, som Novo Nordisk nu har etableret flere fælles postdocprogrammer med. "Samarbejdet mellem universiteterne og industrien bliver stadig vigtigere, når nye opdagelser skal omformes til diabetesmedicin," siger Peter Kurtzhals.

### FREMtiden FOR GLP-1

Novo Nordisk fortsætter også sin forskning i GLP-1 (glukagonlignende peptid-1), en lægemiddelklasse med stort innovationspotentiale (se s. 26). Semaglutid, GLP-1-analogen til dosering én gang om ugen, er i fase 3 af det kliniske udviklingsforløb, og oral GLP-1 til dosering som tablet én gang dagligt, er på vej i fase 3. Der forskes desuden i den næste generation af GLP-1-produkter og i nye kombinationer med insulin, der vil kunne give endnu bedre behandlingsresultater.

For at udvide projektporteføljen yderligere har Novo Nordisk for nylig købt en forskningsportefølje af to amerikanske biotekvirksomheder. "Disse virksomheder giver et fantastisk supplement til vores kompetencer, især indenfor proteinkemi, og vil yderligere kunne styrke vores pipeline – ikke mindst indenfor GLP-1- og insulinforskningen," siger Peter Kurtzhals.

### EN KUR MOD DIABETES

Uanset hvor langt man kommer med behandlingsmulighederne, er der stadig én ting, der står øverst på diabetikernes ønskeseddel: en egentlig kur mod sygdommen. "Livet med type 1-diabetes har givet mig nogle fantastiske muligheder, men tag ikke fejl – mit højeste ønske er en kur!" understreger Tanner Barton. "Og jeg tror, potentialet for at finde en kur i min levetid er indenfor rækkevidde, hvis verdens bedste hjerner arbejder sammen om opgaven."

Novo Nordisk er opsat på at finde en kur og arbejder fortsat med stamcelleforskning. "Vi er tættere end nogensinde på målet, men vi ønsker ikke at skabe falske forhåbninger. Det er en ekstremt vanskelig opgave, og vores investering er meget langsigtet," understreger Peter Kurtzhals.

Herudover er Novo Nordisk i gang med at undersøge en lovende behandling, som dog ikke er en egentlig kur. Det drejer sig om et stof, som kan bevare betacellefunktionen og derved forhindre udviklingen af type 1-diabetes.

"Hos Novo Nordisk tror vi grundlæggende på, at fremtidens diabetesbehandling ikke bare bliver 'mere af samme skuffe'. Det bliver noget nyt, innovativt og spændende. Vi står ved vores aspiration og vores tro på, at vi kan vedblive med at komme med noget bedre end det, vi kan tilbyde i dag. For hvert skridt kommer vi tættere på målet og på at hjælpe diabetikere til et liv med så få begrænsninger som muligt," slutter Peter Kurtzhals.





# GLP-1

## LILLE PROTEIN, STORT POTENTIALE

GLP-1-analoger (glukagonlignende peptid-1) er en forholdsvis ny form for diabetesbehandling, men Novo Nordisks forskere har arbejdet med dem i næsten et kvart århundrede. "GLP-1 er et utroligt spændende peptid," forklarer koncernforskningsdirektør Mads Krogsgaard Thomsen (peptid er fagudtryk for et lille protein). "Vi har længe kendt til den vigtige rolle, GLP-1 spiller i stofskiftet, men det er først for nylig, at vi har fået en forståelse for nogle af dets andre funktioner i kroppen. Det åbner op for nogle helt nye muligheder i forskningen."

Novo Nordisk er i dag førende på markedet for GLP-1 til behandling af type 2-diabetes. Stoffet hedder liraglutid og er en GLP-1-analog, der markedsføres under produktnavnet Victoza® og tages som en daglig injektion. I 2015 lancerede Novo Nordisk en version af præparatet i en højere dosis under produktnavnet Saxenda® til behandling af fedme. Men det, som Mads Krogsgaard Thomsen er allermost begejstret for, er de mange, nye potentielle behandlingsmuligheder baseret på GLP-1-analoger, som hans folk arbejder på, og som retter sig mod diabetes, fedme og andre indikationer.

### ET EFFEKTIVT LILLE PROTEIN

Lotte Bjerre Knudsen, scientific vice president i Global Research, har været en af drivkræfterne i Novo Nordisks GLP-1-forskning, lige siden virksomheden først fattede interesse for dette peptid. "Det, der gør GLP-1 så effektivt, er, at det virker på flere fronter samtidig – bl.a. sænker det blodsukkerniveauet med lav risiko for hypoglykæmi, samtidig med at det nedsætter appetitten, hvilket kan føre til vægttab," siger hun.

Hormonet i sin naturlige form er imidlertid uegnet som lægemiddelkandidat. "GLP-1 har en halveringstid i blodet på under to minutter og duer derfor ikke i sin naturlige form som lægemiddel. Vi har derfor måttet bruge vores ekspertise indenfor proteinmodifikation til at skabe en ændret version – en analog – som kan virke i 24 timer. Det har vi gjort ved at hæfte en naturligt forekommende fedtsyre på GLP-1-peptidet, som hæmmer elimineringen af GLP-1. Molekylet fik navnet liraglutid. Vi fremstillede det for første gang i 1997, og vi var alle utrolig stolte, da vi kunne indlede de første kliniske forsøg med stoffet," fortæller Lotte Bjerre Knudsen.

### EN BANEVRYDENDE BEHANDLING

Liraglutid, som har 97% lighed med det GLP-1, kroppen selv producerer, blev lanceret i 2009 til behandling af type 2-diabetes og var markedets første GLP-1-produkt til dosering én gang dagligt. "Jeg tænkte ikke på markedspotentialet, da vi begyndte at arbejde med GLP-1. Jeg vidste bare, at dette molekyle havde en meget interessant biologi, og jeg var fokuseret på at gøre det, vi er bedst til: at fremstille et brugbart præparat til mennesker med diabetes," siger Lotte Bjerre Knudsen.

På verdensplan er der i dag over 1 mio. type 2-diabetikere, der bruger Victoza®, og i 2015 blev Saxenda® lanceret i USA, Canada og Danmark til behandling af fedme.



## OF THE NEXT GENERATION OF GLP-1

oral semaglutid får en kombination af GLP-1-produktets effektive virkemåde og tabletens brugervenlighed.”

**NYE MULIGHEDER**

Novo Nordisk er også i gang med at undersøge potentialet for at bruge GLP-1-analoger til behandling af andet end diabetes og fedme. Novo Nordisk planlægger at påbegynde et klinisk fase 2-program i 2016, der skal undersøge semaglutid til behandling af leversygdommen ikke-alkoholisk steatohepatitis (NASH).

NASH er en almindeligt forekommende leversygdom, som kan medføre skrumpelever, leverkræft og leversvigt, og som der p.t. ikke findes nogen effektiv behandling for. NASH er en af de mest alvorlige

Novo Nordisks voksende ekspertise indenfor proteinmodifikation har gjort det muligt for forskerne at ændre den fedtsyre, som er bundet til GLP-1-molekylet, med det resultat, at semaglutid forbliver i blodet i længere tid end liraglutid. Det betyder, at semaglutid kan doseres én gang om ugen i stedet for én gang dagligt som liraglutid.

I løbet af de kliniske fase 2- og 3-studier, har Novo Nordisk arbejdet videre med GLP-1-molekylet og har efterfølgende skabt endnu en GLP-1-analog, semaglutid, som har vist stort potentiale i de kliniske fase 2- og 3-studier.

## ENDNU STØRRE POTENTIALE



Glukagonlignende peptid-1 (GLP-1) produceres i tarmen og hjernen, når man spiser. GLP-1 arbejder sammen med bugspytkirtlen for at øge mængden af insulin i kroppen. Det stimulerer betacellernes udskillelse af insulin i blodsukkeret. Samtidig øger GLP-1 mæthedsformemmelsen og dæmper signaler om sult, hvilket fører til lavere madindtag.

## SÅDAN VIRKER GLP-1



## FEDMEBEHANDLING

NÅR MARKEDET  
BYGGES FRA BUNDEN

Hvordan markedsfører man en behandling for en sygdom, som mange læger ikke anerkender? Det er udfordringen, Novo Nordisk står overfor efter lanceringen af Saxenda®, virksomhedens lægemiddel til fedmebehandling.

Daglig stigmatisering er en smertefuld virkelighed for mennesker, der lever med svær overvægt (fedme). Samfundets stempeling begynder ofte med mobning i skolegården og ender med en ufølsom læge, der nægter at ordinere andet end "spis mindre, rør dig mere".

Det er også den største barriere, Novo Nordisk må forcere for at opnå succes med Saxenda® (liraglutid 3 mg), virksomhedens første produkt indenfor medicinsk behandling af svær overvægt. Selvom produktet for nylig blev lanceret i USA, hvor omkring 35%<sup>15</sup> af befolkningen er svært overvægtig, forventes det på ingen måde at blive en øjeblikkelig succes.

"Ja, Saxenda® har et enormt potentiale, men det bliver ikke til nogen blockbuster lige med det samme," fortæller Jakob Riis, koncerndirektør med ansvar for China, Pacific & Marketing. "Forhåbentlig kommer det en dag, men tidshorisonten er meget længere, end når vi lancerer et produkt på et etableret marked med en etableret ordineringspraksis.

Husk på, at mange mennesker – herunder også en del læger og andet sundhedspersonale – simpelthen ikke anerkender svær overvægt som en sygdom. Indtil vi kan overbevise dem om noget andet, må vi kæmpe for at indfri produktets fulde potentiale."

Det er derfor, Novo Nordisk har valgt en meget fokuseret tilgang i markedsføringen af Saxenda®, forklarer Jakob Riis: "Vi fokuserer udelukkende på mennesker med et BMI på 35 eller derover, da de ofte har behov for at tabe sig hurtigt."

## TIÅRSPLAN

Novo Nordisk har en ambition for de næste 10 år, som starter med information til læger og betalere om de videnskabeligt beviste



fordele ved Saxenda® og ender ud i, at Novo Nordisk får etableret en førende position indenfor fedmebehandling.

"Vores første mål er at sikre, at svær overvægt bliver bredt anerkendt som en kronisk sygdom, hvor selv et moderat vægttab på 5-10% kan påvirke de vægtrelaterede følgesygdomme," forklarer Jakob Riis.

Novo Nordisks ambition er at udvikle en førende portefølje af produkter til behandling af svær overvægt og en pipeline, som om 10 års tid omfatter flere fase 3-programmer – heraf mindst ét, der lover en endnu større vægttabseffekt.

"Det er noget af en opgave, og vi bliver selvfølgelig nødt til at finjustere strategien hen ad vejen," siger Jakob Riis. "Men vi mener, at vores ambition – set over en 10-årig tids-horisont – rammer den rigtige balance mellem det ambitiøse og det opnåelige."

Planen er allerede sat i værk i USA, hvor Saxenda® blev lanceret i april 2015. Takket være indsatsen fra Novo Nordisks lægemiddelkonsulenter, som fra første færd har været i marken for at oplyse potentielle receptudskrivere om produktets sikkerhed og virkningsprofil, er Saxenda® så småt ved at nå ud til dem, der har det største behov.

#### PATIENTER FØR PROFIT

Selvom Saxenda® endnu ikke skaffer de helt store indtægter til virksomheden, er Jakob Riis på det rene med, at succesen – i hvert fald i starten – ikke skal måles i kroner og øre.

"På kort sigt vil vi måle vores succes på de fordele, patienterne opnår. Er de tilfredse med det vægttab, de har opnået? Derudover håber vi at høre fra både de ordinerende læger og betalerne, at produktet rent faktisk lever op til det, vi har stillet i udsigt."

En mand, der ved alt om patientbehov, er Joe Nadglowski, administrerende direktør for Obesity Action Coalition (OAC). Med sine 50.000 medlemmer giver organisationen stemme til mennesker overalt i USA, der lever med svær overvægt – og i direktørens optik har Novo Nordisk allerede gjort en kæmpe forskel. Han er stolt over at have virksomheden som partner i kampen for et bedre liv til de 78,6 mio. voksne amerikanere, som er berørt af sygdommen.<sup>15</sup>

"Novo Nordisk skaber nu grundlaget for, at virksomheden i mange år fremover vil blive anset for at være branchens førende indenfor fedmebehandling," siger han. "I USA efterspørger patienterne nye behandlingsmuligheder for svær overvægt. At man allerede nu har godkendte og markedsførte vægttabsmidler er en kæmpe fordel for dem, der lever med sygdommen."

Men endnu vigtigere er det, at Novo Nordisk anerkender, at det ikke er alle behandlinger, der kommer til at virke for alle patienter, og at man derfor investerer i en hel pipeline af fremtidige fedmebehandlinger. Når dette kædes sammen med et oprigtigt ønske om at engagere sig i og lytte til patienterne, har man grundlaget for en vedvarende succes."

#### BEGYNDELSEN PÅ BEGYNDELSEN

Hvad er så næste punkt på dagsordenen? Ifølge koncernforskningsdirektør Mads Krogsgaard Thomsen er Saxenda® kun begyndelsen på et spændende nyt kapitel for Novo Nordisk.

"Med Saxenda® kan vi hjælpe folk med at forstå, at svær overvægt er en sygdom, der ofte kræver medicinsk behandling, og gradvist opbygge markedet," siger han. "Mit håb er, at vores forskningscenter i Seattle og vores stærke akademiske netværk vil være i stand til at finde nye mål for forskningen og skabe nye biologiske lægemidler, som kan

gøre en endnu større forskel med hensyn til både fysisk sundhed og livskvalitet hos mennesker med svær overvægt."

Et molekyle, som allerede nu har vist stort potentiale, er semaglutid (se s. 26). Ligesom liraglutid er der tale om en langtidsvirkende glukagonlignende peptid-1 (GLP-1)-analog. De seneste resultater fra fase 3 tyder imidlertid på, at semaglutid kan blive væsentligt mere virkningsfuldt til behandling af svær overvægt.

Ifølge Mads Krogsgaard Thomsen vil man måske i sidste ende opnå de allerbedste resultater med kombinationsbehandlinger – et område, han beskriver som 'legepladsen' for Novo Nordisks forskning og udvikling.

"Hvis vi kigger 10 år ud i fremtiden, har vi nogle meget stærke ambitioner omkring ny fedmemedicin – eller mere specifikt kombinationsbehandlinger, der udnytter synergi-effekten," tilføjer han.

Et kig på pipelinen giver en ide om, hvad der er i vente. Foruden semaglutid har Novo Nordisk allerede tre lovende nye lægemiddelkandidater under udvikling til behandling af svær overvægt: NN9030, en helt ny glukagonanalog, som er designet til brug i kombination med liraglutid, NN9838, en helt ny langtidsvirkende amlinanalog, og NN9747, en helt ny langtidsvirkende PYY-analog (PYY er et humant peptid, som udskilles i forbindelse med måltider, og som har vist sig at reducere appetitten).

"Og det er kun begyndelsen på begyndelsen," siger Mads Krogsgaard Thomsen. "Med vores pipeline og strategi indenfor fedmebehandling er vi rigtig godt rustet til at sikre en førerposition på dette felt i de næste mange år – til gavn for mennesker, der kæmper med svær overvægt."

#### HVAD ER FEDME?

Fedme defineres som en tilstand, hvor mængden af fedt i kroppen er unormal eller forøget i en sådan grad, at det kan have konsekvenser for helbredet hos mennesker med et kropsmasseindeks (BMI) på over 30. BMI er på nuværende tidspunkt det bedste alment anvendte mål for graden af overvægt og fedme,<sup>2</sup> men er ikke i sig selv et udtryk for sundhedsrisiko. BMI udtrykker sammenhængen mellem en persons højde og vægt og er almindeligt anvendt til at klassificere overvægt og fedme hos voksne. En persons BMI udregnes ved at dividere vægt i kg med højde gange højde i meter (kg/m<sup>2</sup>).

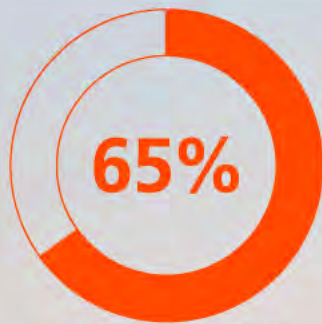
**34,9%** AF ALLE VOKSNE AMERIKANERE (OVER 20 ÅR) ER SVÆRT OVERVÆGTIGE (BMI ≥ 30)\*

\* Ogden CL, Carroll MD, Kit BK & Flegal KM. Prevalence of Childhood and Adult Obesity in the United States, 2011–2012. *The Journal of the American Medical Association* 2014; 311(8):806–814.



# TIL KAMP MOD DIABETES I BYER

Hvad gør indbyggerne i byer sårbare overfor udvikling af diabetes, og hvordan kan vi forhindre, at de i det hele taget får sygdommen? Disse og mange andre spørgsmål blev drøftet af de over 250 internationale delegerede ved Cities Changing Diabetes-initiativets første konference i København i november 2015.



AF ALLE MED DIABETES  
BOR I BYOMRÅDER<sup>1</sup>

To tredjedele af verdens 415 mio. diabetikere bor i byer, og andelen ventes at stige til tre fjerdedele i 2040,<sup>1</sup> når tallet når op på 642 millioner. Byer har potentiale til at sikre indbyggerne væsentlige sundhedsfordele, men samtidig er den enorme menneskelige og økonomiske byrde, som diabetes udgør, en følge af den måde, mennesker lever i byerne.

Partnerskabet Cities Changing Diabetes har i sit andet år opnået momentum. Udover de stiftende partnere, Novo Nordisk, University College London (UCL) og Steno Diabetes Center, har fem byer – København, Houston, Mexico City, Shanghai og Tianjin – tilsluttet

sig. I 2016 vil også Johannesburg og Vancouver tilslutte sig initiativet, der har til formål at identificere, forstå og gøre noget ved årsagerne til diabetes i byer.

## FORSTÅ UDFORDRINGEN

Cities Changing Diabetes har en trefaset strategi: at kortlægge problemet, at udveksle erfaringer med byer overalt i verden og at fungere som katalysator i indsatsen mod den stigende udbredelse af diabetes i byer. I kortlægningsfasen etableres fundamentet for den fremtidige indsats, forklarer Jakob Riis, koncerndirektør i Novo Nordisk: "Vi ved, at diabetes i byerne knytter sig til kostvaner og livsstil, men vi kan ikke gøre noget ved problemet uden først at forstå, hvad der ligger bag. På samme måde som Sherlock Holmes spurgte, 'hvorfor gæde hunden ikke?', skal vores forskning også stille intelligente nye spørgsmål, så vi kan få større viden om denne nye udfordring."

Som led i den indledende kortlægningsfase blev der i 2015 gennemført den hidtil mest omfattende undersøgelse af diabetes i byer under ledelse af UCL i samarbejde med førende forskere i de fem tilsluttede byer. Undersøgelsen omfattede over 550 interview med personer, som enten var i risikogruppen eller allerede havde fået diagnosen diabetes. Undersøgelsen, som var den første af sin art, viste, at sociale og kulturelle faktorer spiller en langt større rolle for at udvikle diabetes i verdens byer end hidtil antaget.

Der var mange eksempler på disse faktorer på hvert af undersøgelsesstederne, og det kom ofte som en overraskelse for erfarne forskere. I Mexico City kunne det konstateres, at kønsroller direkte påvirkede risikoen for





diabetes, idet kvinder forsømte deres helbred for at undgå at blive opfattet som besværlige. I Shanghai betød den kulturelt bestemte tendens til at benægte modgang, at diabetikere var mindre tilbøjelige til at søge hjælp hos venner, familie eller behandlere. I Houston var betydningen af sociale og kulturelle faktorer så stor, at resultaterne udfordrede den traditionelle opfattelse af, at dårligt stillede mennesker er mest udsatte, idet resultaterne viste, at befolkningsgrupper både med og uden økonomiske problemer havde en højere risiko for diabetes.

Resultaterne vil få stor betydning for fremtidens forskning og interventionsstrategier, og de vil være nyttige over hele diabetes-spektret – lige fra den indledende risiko til diagnose og behandling. Selvom faktorerne giver sig udtryk på forskellig vis i forskellige byer, kan de bruges til at opbygge en ramme for en ensartet tilgang til indsatsen for at forstå diabetes i andre af verdens byer.

David Napier, professor i medicinsk antropologi ved UCL og leder af det globale forskningsarbejde, er overbevist om, at forskningen har givet et løft til den traditionelle opfattelse af diabetes i byer: "For første gang kan vi med sikkerhed sige, at vi har opnået en holistisk forståelse af risikoen for at udvikle diabetes i byer. Især betyder vores nye forståelse for betydningen af kulturelle og sociale faktorer for sygdommen, at vi nu har fået en ide om, hvordan og hvorfor tidligere bestræbelser måske ikke har virket, og vi kan overveje nye løsninger på traditionelle problemer som f.eks. kost og inaktivitet."

#### NÆSTE SKRIDT ER HANDLING

Cities Changing Diabetes-konferencen var den første vigtige milepæl for partnerskabet og var den første lejlighed for partnerne til at mødes for at drøfte resultaterne fra undersøgelsen og udveksle lokale resultater og erfaringer. Konferencen markerede desuden overgangen til initiativets næste fase for de delegerede fra 27 lande, som rettede deres opmærksomhed mod handlingsfasen. Derfor fokuserede hovedtalere og workshops ikke blot på diabetes, men også på byplanlægning, samarbejde og støtte fra fagfolk.

Københavns overborgmester, Frank Jensen, sagde efter åbningen af konferencen: "Ved at deltage i dette partnerskab har vi på den ene side fået bekræftet, hvad det er, der gør København til sådan en fantastisk by at bo i. Men på den anden side har vi også fået viden om, hvor vi skal sætte ind for at forbedre borgernes sundhed og trivsel. Mødet med kolleger fra andre storbyer, partnere og eksperter på denne konference vil nu sætte os i stand til at iværksætte nye løsninger, som kan sikre og forbedre sundheden for indbyggerne i København."

I de fem byer har handlingsfasen taget fart i 2015. Via lokale møder har partnerne allerede taget kontakt til hundredvis af interessenter, bl.a. ngo'er, trossamfund, arbejdsgivere og sundhedssektoren, for at udveksle lokale erfaringer og viden, der kan udmøntes i handlingsplaner. Som led i det overordnede mål om at fremme forebyggelse, tidlig diagnose og forbedret behand-

**I 2050 2/3**  
**FORVENTES**  
**AF VERDENS BEFOLKNING AT**  
**BO I BYER**<sup>16</sup>

ling stemte deltagerne ved konferencens afslutning for at fokusere indsatsen på bl.a. lokale initiativer, der går videre end den traditionelle kliniske behandling og integrationen af sundhed i byplanlægning og kommunalpolitik.

Novo Nordisk har forpligtet sig til at investere yderligere 20 mio. amerikanske dollars i initiativet i form af ekspertbistand og forskningsmidler frem til 2020. Desuden indgik virksomheden i december 2015 et partnerskab med C40 – verdens største netværk af megabyer – for at rykke sundhed længere op på dagsordenen hos dem, der leder og designer byer rundt om i verden.

Lars Rebieen Sørensen, administrerende direktør for Novo Nordisk, sagde om det fremtidige arbejde: "Vi er stadig overbevist om, at en effektiv indsats mod diabetes i byer er det rigtige – både for vores virksomhed og for det globale samfund, vi opererer i. Vi ønsker at ændre diabetes, og for at nå det mål er det nødvendigt at skabe sunde byer for at bremse den voksende udbredelse af sygdommen." Læs mere om partnerskabet Cities Changing Diabetes på [citieschangingdiabetes.com](http://citieschangingdiabetes.com).





# 30 ÅRS INDSATS FOR AT ÆNDRE HÆMOFILI

Novo Nordisk har et stærkt engagement i at bekæmpe hæmofili. Med afsæt i erfaringerne med NovoSeven® har virksomheden i de senere år udvidet sin tilstedeværelse indenfor dette behandlingsområde med NovoThirteen® og NovoEight®.

Man skal ikke langt tilbage i tiden, før der ikke var meget at stille op for mennesker med hæmofili, hvis de udviklede antistoffer (inhibitorer) mod den eksisterende medicin. Men i juni 1985 gik Novo Nordisk i gang med at udvikle rekombinant faktor VIIIa, det aktive stof i NovoSeven®. Efter mere end 10 års indsats kom NovoSeven® på markedet – en behandling, der betød, at blodet hos inhibitorpatienter kunne danne stabile propper uden brug af de gængse faktorpræparater. Da NovoSeven® ikke er baseret på humant blodplasma, betød det samtidig, at man undgik datidens bekymringer omkring kontamineret blod.

Paul Huggins, som er ansvarlig for den globale markedsføring af Novo Nordisks biofarmaceutiske produkter i Zürich, Schweiz, erkender, at udviklingen af NovoSeven® var et stort og risikabelt skridt for virksomheden. "Forretningspotentialet var ikke overbevisende, da patientgruppen kun bestod af nogle få tusinde mennesker. Men virksomhedens ledelse besluttede alligevel, at den ikke kunne ignorere det udækkede medicinske behov, fordi Novo Nordisk havde kompetencerne til at udvikle et potentielt egnet produkt," forklarer han.

NovoSeven® viste sig at blive en meget vigtig behandlingsmulighed, som i dag anvendes til akut behandling af blødningsepisoder og til standsning af blødninger under operationer hos inhibitorpatienter og patienter med erhvervet hæmofili, faktor VII-mangel og Glanzmanns trombasteni.

## DET HANDLER OM VALGMULIGHEDER

I midten af 2000'erne begyndte Novo Nordisk at udvikle nye og innovative faktor VIII-, IX- og XIII-produkter til behandling af koagulations sygdomme.

## HVAD ER HÆMOFILI?

Hæmofili er en arvelig eller erhvervet koagulationsforstyrrelse, der forhindrer blodet i at størkne. Mennesker med hæmofili mangler helt eller delvist en vigtig koagulationsfaktor, som er nødvendig for dannelse af stabile hæmostatiske propper. Uden behandling kan ukontrollerede indre blødninger medføre stivhed, smerte, svære ledskader og endda døden. Behandling med de manglende koagulationsfaktorer kan iværksættes akut, når blødningen opstår, men gives i stigende grad også forebyggende (profylaktisk). Mennesker med hæmofili A, ca. 350.000<sup>17</sup> mennesker, har enten helt manglende, nedsat eller defekt evne til at producere koagulationsfaktor VIII i kroppen. Mennesker med hæmofili B, ca. 70.000<sup>18</sup> mennesker, har manglende evne til at producere koagulationsfaktor IX. Begge typer er arvelige.

"I 2012 lancerede vi NovoThirteen®, som i nogle lande markedsføres under navnet Tretten®, og som er beregnet på en meget lille og udsat gruppe mennesker med medfødt faktor XIII-mangel – en meget sjælden og alvorlig koagulationsforstyrrelse, som kun berører omkring 1.300 mennesker i hele verden," siger Paul Huggins. "Dermed havde vi to produkter til nogle patientgrupper, som ikke havde fået ret megen opmærksomhed fra andre lægemiddelvirksomheder. Derfor var lanceringen af NovoEight® sidste år meget vigtig for os, da det var vores første produkt, der var rettet mod en bredere gruppe af hæmofilpatienter."

På godkendelsestidspunktet var NovoEight® det første nye rekombinante faktor VIII-produkt til behandling af hæmofili i Europa og Japan i mere end et årti. Det blev lanceret i Europa og Japan i 2014 og i USA i 2015. "NovoEight® har fået en meget fin modtagelse i USA, hvor salget har overgået vores forventninger. Patienterne kan godt lide – og fortjener – at have et valg, og jeg tror, det er derfor, at NovoEight® er blevet modtaget så positivt," forklarer Paul Huggins.

## TRE ÅRTIER MED FORSKNING OG UDVIKLING

Tredive år efter lanceringen af NovoSeven® er Novo Nordisk stadig stærkt engageret i hæmofilbehandling.

Novo Nordisk forventer at indsende registreringsansøgning for langtidsvirkende udgaver af faktor IX (N9-GP) og faktor VIII (N8-GP) i henholdsvis 2016 og 2018. Hermed vil virksomheden kunne tilbyde endnu flere behandlingsmuligheder for mennesker med hæmofili.

Novo Nordisk har også en langtidsvirkende udgave af en rekombinant faktor VIIa i præklinisk udvikling, som forhåbentlig vil kunne gøre den rutinemæssige forebyggende behandling til normen for inhibitorpatienter. Virksomheden er desuden i gang med at udvikle et monoklonalt antistof mod TFPI (Tissue Factor Pathway Inhibitor) til forebyggelse af blødninger efter injektion i underhuden (se oversigten over udviklingsprojekter på s. 21).

## NOVO NORDISK HAEMOPHILIA FOUNDATION

Den 25. januar 2015 fejrede Novo Nordisk Haemophilia Foundation (NNHF) 10-årsjubilæum. Fonden er en uafhængig nonprofitorganisation, der fokuserer på at støtte projekter, der kan forbedre adgangen til behandling for mennesker med hæmofili og beslægtede koagulationsforstyrrelser. Siden NNHF blev oprettet, har organisationen støttet 168 programmer i 63 udviklingslande, hvor mange mennesker med koagulationsforstyrrelser stadig mangler tilstrækkelige muligheder for diagnosticering og behandling. Læs mere på [nnhf.org](http://nnhf.org).



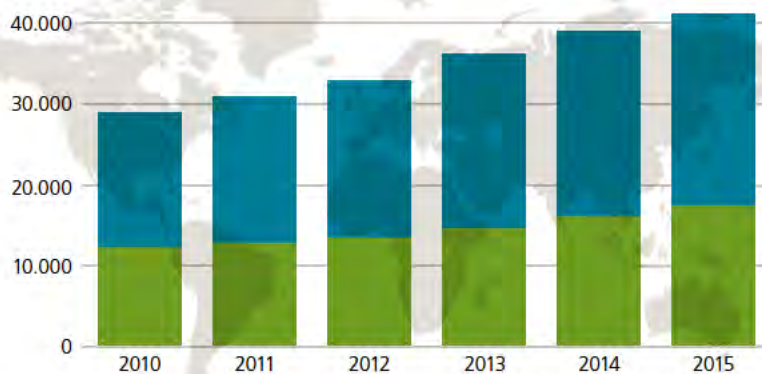


# MENNESKENE BAG DET HELE

Bag enhver succesrig virksomhed står dygtige medarbejdere. I Novo Nordisks tilfælde flere end 40.000 mennesker, som dag ud og dag ind hver især yder deres bidrag til, at det komplekse maskineri, som en global organisation er, fungerer optimalt. Det gør de med dygtighed, engagement og en passion for at forbedre tilværelsen for mennesker med diabetes og andre alvorlige kroniske sygdomme. Her er nogle tal om menneskene bag Novo Nordisk.

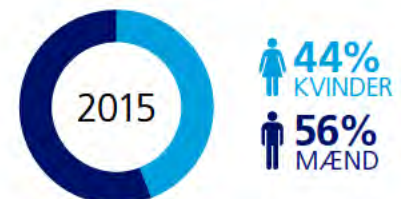
## UDVIKLING I MEDARBEJDERANTALLET\*

■ Danmark ■ Udenfor Danmark



## UDNÆVNELSER TIL LEDERSTILLINGER\*\*

# 1.373



## UDVIKLING I KØNSMANGFOLDIGHED I LEDELSEN

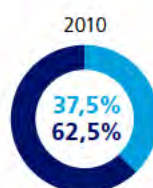
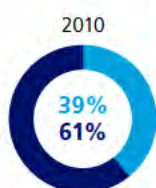
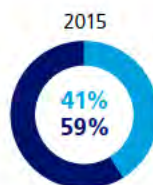
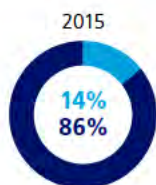
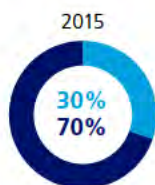
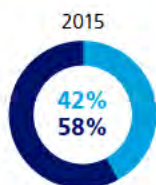
♀ Kvinder ♂ Mænd

Afdelingsledere/  
teamledere

Funktionschefer  
(CVP og VP)/  
datterselskabsledere

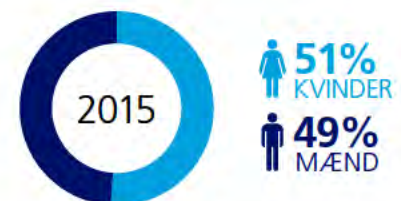
Koncerndirektører/  
direktører

Total



# 1.827

INTERNE FORFREMMELESER\*\*\*



SAMLET FASTHOLD-  
ELSESPROCENT\*\*\*\*

# 90,8%

MEDARBEJDER  
ENGAGEMENT\*\*\*\*\*

# 4,3

\* Udvikling i medarbejderantallet, ekskl. NNIT A/S. \*\* Alle udnævnelser til lederstillinger, inkl. interne forfremmelser og eksterne nyansættelser i 2015, ekskl. NNIT A/S. \*\*\* Medarbejdere, der er flyttet til et job på et højere niveau indenfor en 12-måneders periode, ekskl. NNIT A/S. \*\*\*\* Fastholdelse af medarbejdere, ekskl. NNIT A/S. \*\*\*\*\* Arbejder i overensstemmelse med Novo Nordisk Way (skala 1-5).

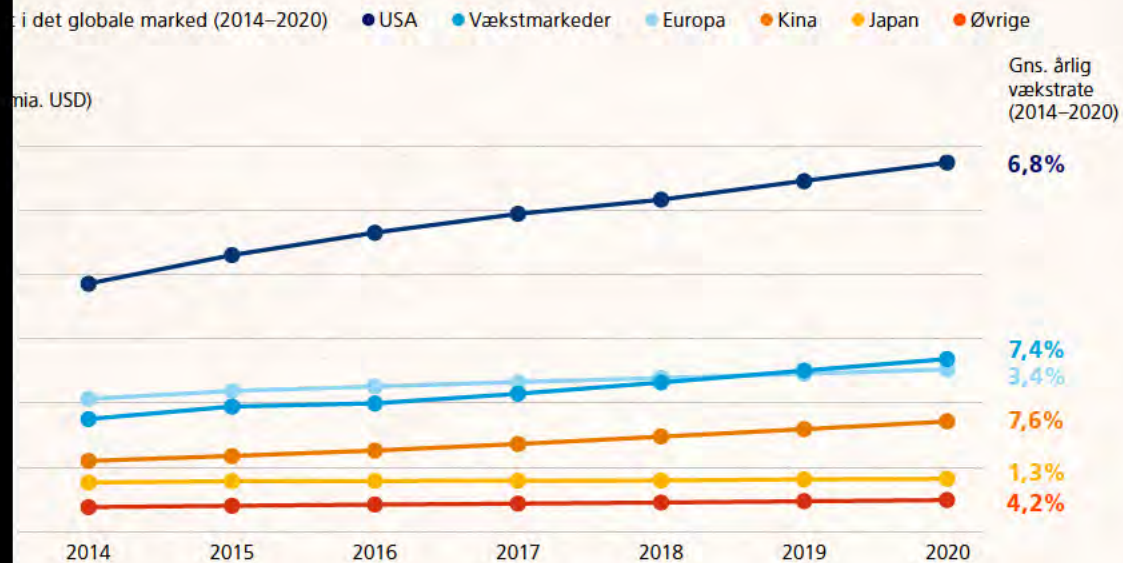


# FREMTIDEN FOR





## **GLOBALE LÆGEMIDDELMARKED VENTES AT VOKSE MED 6% OM ÅRET PERIODEN 2014–2020: DET VIL BRINGE DET SAMLEDE MARKED OP PÅ BILLIONER AMERIKANSKE DOLLARS I 2020**



Kilde: IMS global markedsprognose, sept. 2015. Prisniveauer af producent, eksklusive rabatter og prisnedslag.

der der heftige diskussioner og forhandlinger mellem  
handlere, patienter, lægemiddelvirksomheder og en  
mled om, hvilke patienter der skal have adgang til  
og ydelser – og til hvilken pris. Og ikke mindst: Hvem  
gen?

med rette) hævde, at det ikke er en ny diskussion. For  
har været sundhedssystemer til, har man diskuteret,  
år balance mellem adgang, omkostninger og kvalitet  
nenter i et sundhedssystem. I de senere år har mange  
lid oplevet, at om-kostningsbegrænsning er blevet  
faktor, når der indføres nye tiltag eller reformer i  
rne. Det har bl.a. betydet, at flere patienter oplever,  
e kan få adgang til de lægemidler og den behandling,  
kunne forvente blev dækket af det offentlige  
eller deres egen forsikring.

trien mærker effekten af det skarpe fokus på om-  
sning i form af stadig vanskeligere forhandlinger om  
om i nogle tilfælde medfører, at der ikke ydes tilskud  
sundhedssystem, eller, som i USA, at man udeluk-  
sundhedsforsikringsselskabers lister over godkendte

de virksomheder må forcere det, der er blevet  
jerde forhindring', når de lancerer nye produkter –  
s krav om, at virksomhederne skal påvise, at deres  
ke bare er af høj kvalitet, virkningsfulde og sikre,  
værdi for penge. For at forcere denne fjerde  
virksomhederne vise, at deres produkter er mere  
d relevante konkurrerende produkter, og at den  
opvejes af besparelser et andet sted i sundheds-  
ler måske ikke som et urimeligt krav, men er ofte  
et skyldes bl.a., at fordelene ved at bruge et nyere  
rste viser sig flere år senere – og for dem, der skal få  
til at gå op, er dette ikke altid et vægtigt argument.

er er et godt eksempel: En ny behandling hjælper  
ker til at opnå bedre blodsukkerregulering end et

ældre produkt. Det kan på kort sigt give den pågældende en bedre  
livskvalitet – hvilket er vigtigt – men omkostningsbesparelser ses først  
langt senere, fordi vedkommende nu har mindre risiko for at udvikle  
de alvorlige senkomplikationer, der kan opstå i forbindelse med  
diabetes: blindhed, amputationer og nerveskader. I USA for eksempel  
er det estimeret, at af de samlede behandlingsudgifter til diagnosticeret  
diabetes udgør hospitalsindlæggelser 43%, medicin til behandling af  
komplikationer 18%, diabetesmedicin og -udstyr 12% og andre  
omkostninger 27%.

### **RESULTATER FRA DEN VIRKELIGE VERDEN**

Koncernchef i Novo Nordisk Jakob Riis, der bl.a. har ansvar for at  
sikre markedsadgangen for virksomhedens produkter, fremhæver en  
anden komplicerende faktor, når lægemiddelvirksomheder og betalere  
forhandler priser og tilskud til et produkt: "Der findes ikke en fælles  
standard for, hvordan man vurderer, om en ny behandling vil føre til  
bedre behandlingsresultater for bestemte patienter, og den deraf føl-  
gende økonomiske værdi. Hvert behandlingssystem gør det tilsynela-  
dende på sin egen måde."

En generel tendens er dog, at betalere ønsker flere beviser fra 'den  
virkelige verden' for fordelene ved et nyt produkt – udover dataene for  
effekt og sikkerhed fra de kliniske studier, som sundhedsmyndigheder-  
nes godkendelse er baseret på. Betalere ønsker at vide, om der kan  
opnås tilsvarende resultater i det virkelige liv, når patienterne ikke del-  
tager i et klinisk forsøg.

"Vi skal finde frem til, hvordan vi kan indsamle og analysere disse data  
på en måde, som tilfredsstiller betalere. Det bliver i de kommende år  
et fokusområde for de dele af vores organisation, der arbejder med  
udvikling og markedsadgang," siger Jakob Riis.

I den forbindelse nævner han de muligheder, der ligger i et stadig  
mere digitaliseret behandlingssystem. Som eksempel fremhæver han  
det partnerskab, Novo Nordisk indgik med IBM Watson Health i  
december 2015: "Ved at kombinere vores førende position indenfor  
diabetesbehandling med det analytiske potentiale i IBM Watson  
Healths kognitive computerteknologi vil vi undersøge mulighederne  
for at skabe bedre diabetesløsninger ved at indsamle og analysere

FORTSÆTTES ►



## BEHANDLERE GÅR SAMMEN I INTEGREREDE BEHANDLINGSNETVÆRK I USA



såkaldte real-time, real-world data om vores eksisterende diabetes-lægemidler. Hvis det lykkes, vil vi ikke blot kunne hjælpe diabetikere med at opnå en bedre livskvalitet ved at gøre behandlingen enklere, mere virkningsfuld og målbar – det vil også bidrage til at imødekomme betalernes krav om beviser fra den virkelige verden for fordelene ved vores produkter.”

### VIGTIGHEDEN AF INNOVATION

Trods udfordringerne vedrørende markedsadgang og prispres forventes lægemiddelindustrien fortsat at vokse. Behovet for flere og bedre lægemidler vokser i takt med aldrende befolkninger og stigende forekomst af kroniske sygdomme, eksempelvis type 2-diabetes, der udvikles med alderen som følge af usunde kostvaner og for lidt motion. Samtidig vil den økonomiske vækst i visse lande give mulighed for at øge investeringerne i sundhedssektoren. I den kontekst forventer den førende globale dataleverandør IMS Health, at lægemiddelindustrien vil øge sit globale salg med 6% om året frem til 2020.

Alle virksomheder vil dog ikke klare sig lige godt. For nogle er den eneste mulighed at lade sig opkøbe eller fusionere med en anden virksomhed. Ifølge en opgørelse fra Thomson Reuters i oktober 2015 er der siden begyndelsen af 2014 annonceret planer om fusioner og virksomhedsopkøb til en værdi af over 850 mia. amerikanske dollars.

”Novo Nordisk har ingen planer om at indgå i en sådan konsolidering i branchen,” siger administrerende direktør Lars Rebién Sørensen. ”Det er rigtigt, at sådanne tiltag kan være med til at booste indtjeningen, når salget er under pres – men kun på kort sigt. Langsigtet værditilvækst skabes kun gennem innovation. Så længe vores forsknings- og udviklingsorganisation kan blive ved med at frembringe nye lægemidler, der er de første i en ny klasse eller markant bedre end produkter i en eksisterende klasse, kan vi fortsætte vores vækst. Vi har i øjeblikket en meget stærk pipeline af produkter, som vi vil lancere i de kommende år. Vores største udfordring bliver at gøre produkterne tilgængelige for så mange patienter som muligt og samtidig opnå priser, der afspejler de nye produkters kliniske værdi. Det er ikke nogen let opgave, sådan som sundhedssektoren ser ud i dag, men det er en opgave, som vi er fast besluttet på at føre ud i livet.”

Følgende er en oversigt over de største lægemiddelmarkeder i verden.

### USA

USA er verdens største marked for lægemidler, og markedet tegner sig for ca. 44% af det globale salg. Succes skabes først og fremmest gennem konkurrence på produkternes effekt, sikkerhed, kvalitet og pris.

Det amerikanske sundhedssystem er komplekst, fordi det bygger på et indviklet samspil mellem mange forskellige betalere og mellemlid. Omtrent halvdelen af alle amerikanere er forsikret via deres arbejdsgiver – det såkaldte managed care-segment. En tredjedel er forsikret gennem offentlige programmer som Medicare og Medicaid, mens omkring 9% af befolkningen ikke er forsikret. Antallet af offentligt forsikrede ventes at stige i de kommende år, mens der forventes at blive færre, der ikke er forsikret, bl.a. på grund af de offentlige ordninger, der blev indført som led i sundhedsreformen Affordable Care Act. For at styre indkøb og levering af sundhedsydelser indgår arbejdsgivere og offentlige myndigheder aftaler med mellemlid, som f.eks. private sundhedsforsikringsselskaber og de såkaldte pharmacy benefit managers (PBM). Disse omtales ofte som ’betalere’, men forvalter i de fleste tilfælde blot sundhedsmkostningerne på vegne af betalernes.

Forsikringsselskaberne indgår kontrakter med f.eks. læger, hospitaler og apoteksnetværk, der så leverer de ønskede ydelser. Forsikringsdækningen afhænger af betalernes villighed til at betale for udvalgte ydelser til deres ansatte. En PBM er et mellemlid, som indgår kontrakter med betalere og private forsikringsselskaber om forvaltning af apoteksydelser til specifikke befolkningsgrupper.

Forsikringsselskaberne bruger forskellige metoder til at regulere forbrug og udgifter i forbindelse med lægemidler. Blandt de mest anvendte er substitution af originale lægemidler med generiske versioner, mængdebegrænsninger, beslutninger om, at en bestemt medicin kun er tilskudsberettiget på visse betingelser og efter særskilt aftale med forsikringsselskabet, samt strengt kontrollerede ’Preferred Drug Lists’.

### ØGET FOKUS PÅ VÆRDI

Mens sundhedsydelser i USA i mange år blev leveret af små, uafhængige klinikker og hospitaler, hvor betalingen skete som et honorar pr. ydelse, indgår stadig flere behandlere nu i de fuldt integrerede behandlingsnetværk. Der introduceres nye betalingsmodeller, og der kommer flere og flere behandlingsorganisationer til, som modtager betaling på



grundlag af bestemte effektivitets- eller behandlingsmål frem for et honorar for en bestemt ydelse.

Samtidig konsolideres managed care-segmentet, hvilket har medført færre og mere indflydelsesrige betalere. Det har medført hårdere rabatforhandlinger for lægemiddelindustrien. Kontrakter indgås generelt med kortere varighed end tidligere, og ofte indgås de med indbygget prisbeskyttelse, som betyder, at stigninger i listepriisen automatisk udløser en større rabat.

En anden vigtig tendens er det stigende antal mennesker, der opnår dækning via Medicare Part D. De rabatter, som lægemiddelvirksomhederne skal tilbyde i forbindelse med kontrakter under denne ordning, er generelt højere end for kontrakter på det private marked. Alligevel er USA, som i 2015 tegnede sig for 51% af Novo Nordisks samlede salg, det sted, hvor virksomheden forventer at generere størstedelen af sin vækst i de kommende år. De vigtigste vækstmotorer ventes at være større markedsandele på insulinmarkedet, opgraderinger til den nye generation af insulinprodukter samt den fortsatte udbredelse af GLP-1-produkter til behandling af diabetes og fedme.

#### EUROPA

Europa har i en årrække været et marked med ingen eller meget begrænset vækst for de fleste lægemiddelvirksomheder. Det skyldes til dels den økonomiske afmatning i mange europæiske lande i kølvandet på finanskrisen, som har fået myndighederne til at skære ned på deres udgifter på mange forskellige måder. Der er i øjeblikket ingen tegn på, at dette billede vil ændre sig væsentligt i den nærmeste fremtid. IMS forudsiger lav etcifret vækst i de kommende år, hvor speciallægemidler vil tegne sig for næsten hele væksten. Novo Nordisk forventer også meget begrænset vækst i Europa som følge af ovennævnte faktorer, øget konkurrence og virksomhedens høje markedsandel indenfor insulinsegmentet.

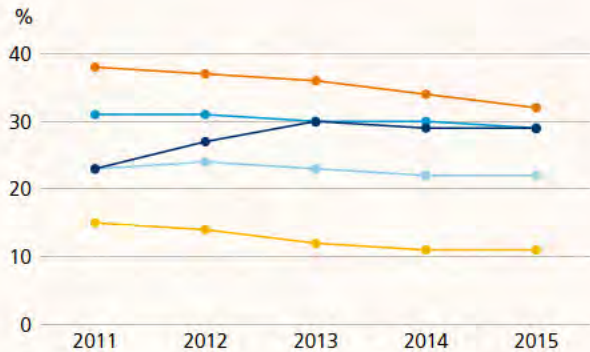
#### KINA

Kina er verdens næststørste sundhedsmarked. Årlige vækstrater på 15–20% var normen indtil for nylig, hvor den kinesiske regering foretog store investeringer for at udvide adgangen til behandling, især i storbyerne. Investeringerne blev foretaget som en konsekvens af den stigende efterspørgsel fra en aldrende befolkning, der blev stadig mere disponeret til at betale for sundhedstjenester. I hånden

#### DIABETESBEHANDLING

Markedsandel (værdi) fordelt på geografiske regioner

- Nordamerika
- Europa
- International Operations
- Region Kina
- Japan & Korea



#### VÆKSTMARKEDER

Kina er langt fra det eneste land, der mærker den voksende byrde fra kroniske sygdomme. Mange vækstøkonomier i Asien, Mellemøsten, Afrika og Latinamerika oplever det samme. IMS forventer, at næsten 50% af væksten på lægemiddelmarkedet i perioden 2015–2020 vil komme fra disse lande, fordi deres befolkninger både vokser og bliver ældre, mens den økonomiske vækst vil give flere mennesker adgang til behandling. I Novo Nordisk er disse lande grupperet i International Operations, som er en stor og sammensat region med over 140 lande.

Efter USA repræsenterer landene i International Operations Novo Nordisks største vækstmulighed i de kommende år. Halvdelen af alle mennesker med diabetes bor i denne region, og antallet stiger hurtigere her end noget andet sted. I mange af landene er der både et offentligt

“Vi har i dag en meget stærk portefølje af produkter undervejs, som vi lancerer i de kommende år. Vores største udfordring bliver at gøre dem tilgængelige for så mange patienter som muligt og samtidig opnå en pris, der afspejler den kliniske værdi, de nye produkter tilfører.”

**LARS REBIEN SØRENSEN**  
ADMINISTRERENDE DIREKTØR





# GLOBAL EFTERSPØRGSEL UDLØSER STORE INVESTERINGER I PRODUKTIONSKAPACITET

I 2015 offentliggjorde Novo Nordisk planer om en række større investeringer i nye produktionsanlæg.

Fremstilling af proteiner som f.eks. insulin er en meget kompliceret proces. Hvor andre lægemidler fremstilles ved en række kemiske synteser, er proteiner større, mere komplekse molekyler, og produktion af disse kræver betydelige investeringer i sterile produktionsanlæg og forståelse for arbejdet med levende celler som f.eks. gær til fremstilling af et rent, ensartet produkt.

"Novo Nordisk, som er verdens største insulinproducent, har udviklet sin produktions-ekspertise gennem næsten 90 år. Vi har fremstillet insulin siden 1920'erne, og effektiv storskalaproduktion af proteiner er en af vores kernekompetencer," fortæller Henrik Wulff, koncerndirektør med ansvar for Product Supply, Novo Nordisks globale produktionsorganisation.

"Der er indført mange fornyelser gennem årene, da vi hele tiden arbejder på at gøre vores produktionsprocesser endnu mere effektive og stabile," fortsætter han. "Og vores fokus er stadigvæk det samme – med stadig større ambitioner: at levere produkter af høj kvalitet, der lever op til myndighedernes krav, og at opfylde den stadig stigende globale efterspørgsel efter vores produkter."

## DÆKKER GLOBAL EFTERSPØRGSEL

2015 var et spændende år for Product Supply, hvor Novo Nordisk offentliggjorde en række planer om større investeringer i nye produktionsanlæg over de næste fem år. Dette vil også blive afspejlet i Novo Nordisks regnskaber i de kommende år, ifølge Novo Nordisks koncernøkonomidirektør, Jesper Brandgaard. I en kommentar til investeringer sagde han på Novo Nordisks kapitalmarkedsdag i november 2015: "Kravene til understøttelse af fremtidige produktleverancer er stigende, og vi forventer et øget investeringsniveau i forhold til salget i de kommende år."

Den største planlagte investering er en fabrik til fremstilling af aktive lægemiddelstoffer (API) til diabeteslægemidler i Clayton, North Carolina, USA. Fabrikken ventes at være driftsklar i 2020 og skabe op mod 700 nye produktions- og ingeniørjob i Clayton, hvor Novo Nordisk i forvejen beskæftiger over 700 medarbejdere. Yderligere 100 nye job vil blive skabt på en ny lægemiddelfabrik i Måløv. Novo Nordisk planlægger at investere 2 mia. amerikanske dollars i disse to fabrikker over de næste fem år.

Andre større investeringsprojekter, der blev annonceret i 2015, omfatter en påfyldningsfabrik i Hillerød, som skal producere lægemidler til behandling af diabetes og fedme. Den nye fabrik på 10.300 m<sup>2</sup> forventes at stå færdig i 2019 og kommer til at skabe 450 nye produktions- og ingeniørjob i Hillerød, hvor Novo Nordisk i forvejen beskæftiger 1.900 medarbejdere.

"Disse og andre investeringer i vores produktionskapacitet skal ses i lyset af den stigende efterspørgsel efter Novo Nordisks produkter, primært som følge af den stigende forekomst af diabetes i hele verden," forklarer Henrik Wulff.

"Med iværksættelsen af disse omfattende investeringer regner vi med at have tilstrækkelig kapacitet til eksisterende og fremtidige diabetesprodukter et godt stykke ind i det næste årti," siger han. "Og med den nye fabrik i Måløv får vi mulighed for storskalaproduktion af proteinbaserede lægemidler som semaglutid i tabletform. For bare få år siden var der ikke mange, der troede, at det ville være muligt."





#### OPFYLDER LOKALE BEHOV

Product Supply har også fokus på opfyldelse af lokale behov. Derfor åbnede Novo Nordisk i april en ny fabrik til formulering og påfyldning af insulin i Rusland, og i september blev det meldt ud, at Novo Nordisk som den første vestlige lægemiddelvirksomhed har planer om at opføre en fabrik i Iran til fremstilling af præfyldte insulininjektions-systemer.

"Lokale fabrikker giver os mulighed for at reagere hurtigt på lokale krav og for at understøtte forretningen på fremtidige nøglemarkeder," siger Henrik Wulff.

#### FORSYNINGSSIKKERHED FOR PRODUKTER AF HØJ KVALITET

Produktkvalitet og overholdelse af myndighedskrav er det primære fokus for alle medarbejdere i Product Supply. Alle Novo Nordisks fabrikker skal fuldt ud leve op til international og national lovgivning samt standarderne i virksomhedens globale kvalitetsstyringssystem.

"Vi har et meget stærkt kvalitetsstyringssystem i Novo Nordisk, som vi sætter vores lid til, når vi opbygger kompetencer og organisationer over hele verden," forklarer Henrik Wulff. "Vi bruger systemet sammen med

vores omfattende produktionsekspertise og -viden til at sikre, at vi altid overholder høje, ensartede standarder i vores produktionsprocesser over hele verden."

#### STADIG STØRRE PORTEFØLJE GIVER ØGET KOMPLEKSITET

Kompleksiteten i Novo Nordisks produktion er steget i løbet af de seneste år, hvor der er føjet nye produkter til virksomhedens eksisterende portefølje i et hurtigere tempo end nogensinde før. Nye produkter er desuden ofte mere avancerede molekyler end førstegenerationsprodukter, og det stiller generelt krav om mere komplekse produktionsprocesser.

"Vores voksende kapacitet og den stadig mere komplekse produktion kræver optimale planlægnings- og eksekveringsværktøjer," understreger Henrik Wulff. "Product Supply arbejder 24 timer i døgnet, 365 dage om året, og skal hver dag udføre mange vigtige opgaver verden over for at sikre, at vi kan levere kvalitetsprodukter til stadig flere patienter.

Patienternes behov er i sidste ende det, det hele handler om. Patienterne forventer produkter af høj kvalitet, og vi skal sørge for, at vi kan levere dem til tiden og i overensstemmelse med myndighedernes krav – nu og i fremtiden."

### NOVO NORDISKS GLOBALE PRODUKTIONSANLÆG





## MILJØSTRATEGI

# FÅ MERE UD AF MINDRE

I 2020 vil alle Novo Nordisks fabrikker i hele verden bruge elektricitet fra vedvarende energikilder. Men hvad med leverandørernes CO<sub>2</sub>-emissioner?

I årtier har Novo Nordisk haft fokus på at reducere virksomhedens påvirkning af miljøet. I 1993 blev Novo Nordisk en af de første globale virksomheder til årligt at rapportere om sin miljøindsats og fastsætte mål for fremtidige forbedringer.

Miljøstrategien har ændret sig, siden Novo Nordisks første miljøafdeling blev oprettet i 1973. I starten blev der fokuseret på at nedbringe udledningen af forurenende stoffer til luft og vand ved hjælp af de såkaldte 'end of pipe'-løsninger (rensning til sidst i produktionsprocessen), der skulle sikre overholdelse af miljøkravene. "I dag har vi gode systemer og kontroller. Energi-, vand- og affaldsbesparende initiativer er en integreret del af den daglige drift," siger Henrik Wulff, koncerndirektør med ansvar for Novo Nordisks globale produktion.

## GHG-PROTOKOLLEN

Greenhouse Gas (GHG) Protocol Initiative – GHG-protokollen – er et partnerskab mellem virksomheder, ngo'er og regeringer, hvis mission er at udvikle internationalt accepterede standarder for drivhusgasregnskab og -indberetning.

Protokollen definerer tre områder, der skal være med til at definere direkte og indirekte emissionskilder:

1. Direkte drivhusgasemissioner fra kilder, der er ejet eller kontrolleret af virksomheden, f.eks. fra produktionsprocesser.
2. Indirekte drivhusgasemissioner fra produktionen af den elektricitet, virksomheden indkøber og forbruger.
3. Andre indirekte drivhusgasemissioner, der følger af virksomhedens aktiviteter, men som opstår fra kilder, der ikke er ejet eller kontrolleret af virksomheden. Det omfatter emissioner knyttet til affald, vand, forretningsrejser, pendlertrafik og indkøb.

Jing Tommy Wan blev ansat i 2010 som påfyldningsmedarbejder i Tianjin, Kina, og i august 2015 startede han i Novo Nordisks produktion i Hillerød.



## ELEMENTER DÆKKET AF DEN NYE KLIMAAMBITION



I de seneste 10 år har miljøstrategien haft skarpt fokus på reduktion af CO<sub>2</sub>-emissioner fra Novo Nordisks egne produktionsanlæg. Det kom eksempelvis til udtryk i 2006, hvor virksomheden lancerede et langsigtet mål: Novo Nordisk forpligtede sig til i løbet af 10 år at nedbringe de produktionsrelaterede CO<sub>2</sub>-emissioner med 10% i forhold til 2004.

"På det tidspunkt var det et virkelig ambitiøst mål, og vi vidste, at det ville blive svært at opfylde," siger Vibeke Burchard, seniorprojektleder for Novo Nordisks miljøstrategi. "Vi var dengang og er stadig en virksomhed i vækst, og prognoserne viste, at vores energiforbrug ville blive tre gange så stort i denne periode – og alligevel forpligtede vi os til at reducere emissionerne med 10% i absolutte tal."

### ELEKTRICITET FRA VEDVARENDE ENERGIKILDER

Dette fokus på emissioner fra produktionen viste sig at være det helt rigtige. Ved at implementere programmer for energieffektivisering og bruge mere elektricitet fra vedvarende energi – bl.a. ved at omlægge alle fabrikker i Danmark til vedvarende energi fra vindmølleparker i Nordsøen – opfyldte Novo Nordisk faktisk denne ambition allerede i 2010.

Siden da har virksomheden videreudviklet og yderligere optimeret sin energistyring og har for nylig offentliggjort et nyt ambitiøst mål: I 2020 skal alle Novo Nordisks fabrikker i hele verden bruge elektricitet fra vedvarende energikilder.

"Det er meget ambitiøst at sætte et absolut mål om nul CO<sub>2</sub>-emissioner fra elforbruget på vores fabrikker om bare fem år, mens vi samtidig øger produktionen for at følge med den stigende globale efterspørgsel efter vores produkter. Vi er gået i gang med at finde vedvarende energikilder til alle vores fabrikker, f.eks. vind- og solenergi," siger Dorethe Nielsen, senior director i Corporate Environmental Management.

Novo Nordisk har for nylig indgået en kontrakt om vindenergi til fabrikken i Tianjin i Kina og undersøger i øjeblikket mulighederne for at dække elforbruget på fabrikkerne i Clayton i USA og Chartres i Frankrig med vedvarende energi.

Når hele elforbruget bliver dækket af vedvarende energi, er det næste mål at erstatte fabrikernes dampforsyning, der i dag er baseret på fossile brændstoffer som kul og gas, med vedvarende energikilder som biomasse eller biogas.

Indfrielsen af denne ambition kom for nylig et skridt nærmere, idet DONG Energy, som forsyner Novo Nordisks danske insulinproduktion med damp, påbegyndte en undersøgelse af muligheden for at skifte fra kul til biomasse. Hvis resultatet er positivt, vil det betyde, at dampforsyningen fra 2019 vil kunne komme fra en vedvarende energikilde. Undersøgelsen er resultatet af et partnerskab med andre virksomheder i lokalområdet.

### KLIMAET I FOKUS

Nu er Novo Nordisk parat til at tage det næste skridt i sin miljøstrategi. "Når vi har omlagt alle vores fabrikker til vedvarende energi, har vi gjort alt, hvad der er muligt med hensyn til direkte CO<sub>2</sub>-emissioner," forklarer Dorethe Nielsen. "Vi udvider derfor vores strategi til også at omfatte en reduktion af CO<sub>2</sub>-påvirkningen fra såkaldte indirekte emissioner – dvs. emissioner fra kilder, der ikke styres af os, herunder de varer og ydelser, som vi køber, lige fra råvarer til flyrejser."

Novo Nordisk vil fokusere på specifikke typer af indirekte emissioner, som er opstillet i den internationalt anerkendte Greenhouse Gas Protocol (se boks). "Vi vil prioritere de områder, hvor der efter vores vurdering er størst mulighed for at reducere CO<sub>2</sub>-emissionerne. Et tæt samarbejde med vores største leverandører vil være afgørende, når vi skal finde frem til, hvordan de kan

reducere emissionerne, og om der er plads til forbedringer," forklarer hun.

Selvom indirekte emissioner er et forholdsvis nyt område for Novo Nordisk, samarbejder virksomheden allerede med sine største råvareleverandører om at fremme energieffektiviteten og brugen af vedvarende energi.

Nylige analyser har desuden givet Novo Nordisk nyttig viden om to andre former for indirekte emissioner, nemlig fra flyrejser og leasede firmabiler, og virksomheden har planer om tiltag til at reducere emissionerne fra disse kilder, fortæller Dorethe Nielsen. For de øvrige kategorier vil fokus i starten være rettet mod indhentning af pålidelige data, der kan bruges som grundlag for beslutninger om CO<sub>2</sub>-reducerende tiltag.

Koncerndirektør Jakob Riis er formand for Novo Nordisks Social & Environmental Committee. Han forklarer rationale bag det bredere fokus for virksomhedens miljøstrategi: "Vi vil også fremover udfordre os selv og blive bedre indenfor områder som energi- og vandforbrug, affaldsreduktion og direkte CO<sub>2</sub>-emissioner, men er også klar til at udvide vores fokus til indirekte CO<sub>2</sub>-emissioner. Med den overbevisende videnskabelige evidens for stadig tiltagende og mere omfattende klimaændringer er vi simpelthen nødt til at sætte os selv ambitiøse mål på området," siger han.

"Hvilke indikatorer der skal bruges til at måle resultaterne, er dog ikke lige til at sige," erkender han. "Nu hvor alle vores fabrikker snart bruger elektricitet fra vedvarende energi, kan vi ikke længere reducere CO<sub>2</sub>-emissionerne i absolutte tal, når virksomheden vokser så meget, som den gør. Vi er nået frem til, at den bedste måde at måle vores CO<sub>2</sub>-præstation på er at måle CO<sub>2</sub>-emissionerne i forhold til det antal patienter, der behandles med vores produkter, dvs. CO<sub>2</sub>-emissionen pr. behandlet patient. Det er vores ambition at få det tal ned."





Lægemiddelindustrien er forbundet med potentielt alvorlige risici, som investorer skal være opmærksomme på, når de træffer investeringsbeslutninger. Novo Nordisk er ingen undtagelse.

Effektiv risikostyring i en virksomhed handler grundlæggende om tidligt at identificere risici, vurdere dem grundigt og træffe de nødvendige foranstaltninger for at begrænse dem, så de ikke hindrer virksomheden i at nå sine forretningsmæssige mål. Det lyder måske nemt, men virkeligheden er mere kompliceret. Det er en kendsgerning, at en velfungerende risikostyringsproces er afgørende for at sikre Novo Nordisks forretningsmæssige succes på langt sigt, for risici findes overalt, og nogle kan gøre alvorlig skade, hvis de ikke håndteres effektivt.

I lægemiddelindustrien er de fleste risici omfattet af en af de syv kategorier (oplistet på notesblokken). Novo Nordisks overordnede risikoprofil – den samlede vurdering af alle de risici, som Novo Nordisk står overfor – ændrer sig sjældent væsentligt fra år til år, men det gør de enkelte risici.

Jesper Brandgaard, Novo Nordisks koncernøkonomidirektør, er formand for virksomhedens Risk Management Board. Som et eksempel på en risiko, der er vokset i 2015 med hensyn til både sandsynlighed og potentiel indvirkning, nævner han prispresset på Novo Nordisks moderne insulinprodukter i Kina, der sandsynligvis vil blive forstærket i 2016 som følge af en ny budgivningsreform, der blev gennemført i juni 2015.

På spørgsmålet om, hvilke risici der er blevet mindre i løbet af året, fremhæver han risikoen i forbindelse med myndighedsgodkendelse af Tresiba®: "Da vi gik ind i det nye år, vidste vi ikke, om de amerikanske sundhedsmyndigheder, FDA, ville godkende Tresiba® på grundlag af de foreløbige data fra DEVOTE-studiet. Da de gjorde det, kunne vi fjerne denne risiko fra vores risikomatrix," fortæller Jesper Brandgaard og understreger, at det endelige resultat af DEVOTE-studiet først vil foreligge i andet halvår af 2016.

Et andet eksempel, han nævner, er en specifik juridisk risiko, nemlig en række retssager om produktansvar i USA vedrørende inkretinbaserede lægemidler, herunder Victoza®. I november afviste en føderal dommer, som behandlede de fleste af sagerne, sagerne mod Novo Nordisk og andre lægemiddelvirksomheder. Selvom sagen er blevet appelleret, betyder det, at sandsynligheden for en større finansiel indvirkning fra disse sager er lavere.

Nedenfor følger en oversigt over de syv risikokategorier, som Novo Nordisk står overfor.

■ Udvikling af et nyt lægemiddel er en dyr proces, der kan tage mere end 10 år. Processen omfatter en lang række ikke-kliniske afprøvninger og kliniske studier samt en omfattende myndighedsgodkendelsesproces, herunder godkendelse af produktionsanlæggene. Undervejs kan der opstå forhindringer, som kan forsinke udviklingen

af en potentiel produktkandidat og medføre betydelige ekstraomkostninger. I nogle tilfælde kan væsentlige forhindringer føre til, at virksomheden i sidste ende beslutter helt at opgive udviklingen af den potentielle produktkandidat. Data fra lægemiddelindustrien viser, at der er under 35% sandsynlighed for, at en biologisk diabetesproduktkandidat i fase 1 i sidste ende opnår markedsføringsgodkendelse, mens sandsynligheden for succes er ca. 60% for produkter i fase 2 og ca. 80% for produkter i fase 3. Selv da er det dog fortsat meget usikkert, om produktet opnår myndighedsgodkendelse, og i givet fald hvornår.



De væsentligste markedsrisici, der kan påvirke Novo Nordisk, er:

- Prispress og tilskudsrestriktioner fra betalerne
- Nye produkter fra etablerede konkurrenter
- Øget konkurrence fra producenter af biosimilære lægemidler.

Europa, Kina og USA er alle primære markeder for Novo Nordisk, hvor betalerne – både offentlige og private – gør, hvad de kan for at begrænse medicinudgifterne. Det sker typisk ved at presse priserne, kræve højere rabatter og/eller begrænse adgangen og tilskuddet til lægemidler. Det vil næppe ændre sig i den nærmeste fremtid. For Novo Nordisk udgør tilskudsrestriktioner en væsentlig risiko i forbindelse med lancering af nye produkter, eksempelvis Tresiba®. På trods af fordelene for patienterne og data, der understøtter de sundhedsøkonomiske fordele ved denne nye langtidsvirkende insulin, er det ikke altid muligt at opnå markedsadgang på det, Novo Nordisk betragter som rimelige vilkår. Det kan betyde, at virksomheden vælger ikke at lancere Tresiba® eller andre nye produkter i nogle lande, medmindre vilkårene ændrer sig.

Lancering af nye produkter fra etablerede eller nye konkurrenter er en anden generel markedsrisiko. I det store segment for langtidsvirkende insulin lancerede en konkurrent en biosimilær version af den bedst sælgende moderne insulin på en række markeder i 2015 og vil sandsynligvis lancere produktet i USA inden udgangen af 2016. Det er på nuværende tidspunkt svært at vurdere, hvordan og i hvilken udstrækning denne udvikling vil påvirke markedsdynamikken. Udover disse globale risici kan politisk uro eller væbnede konflikter i visse lande i International Operations-regionen udgøre en risiko for Novo Nordisks forretning i kortere eller længere perioder.



Driftsforstyrrelser og driftsnedbrud på et af Novo Nordisks vitale produktionsanlæg eller hos en vigtig leverandør kan påvirke produktionen negativt og potentielt medføre, at medarbejdere kommer til skade, eller at infrastruktur ødelægges. For at imødegå denne risiko er der sørget for brandhæmmende indretninger, alarmer og brandinstrukser, der foretages årlige inspektioner, og der er reserveanlæg og sikkerhedslagre. For at sprede risikoen geografisk og optimere omkostningsstrukturen og forsyningslogistikken har Novo Nordisk etableret produktion i flere lande.



Der kan opstå problemer med kvalitet og produktsikkerhed, f.eks. hvis et produktionsanlæg ikke konstant lever op til myndighedskravene, hvis et produkt ikke opfylder specifikationerne, eller hvis der efter længere tids brug af et produkt opstår bivirkninger, som ikke blev opdaget i de kliniske studier. Novo Nordisk håndterer proaktivt sådanne risici gennem sit kvalitetsstyringssystem, som har fokus på at sikre produktkvaliteten og minimere risiciene for patienterne. Kvalitets-



styringssystemet skal sikre efterlevelse af alle myndighedskrav og omfatter standardprocedurer, kvalitets- og frigivelseskontrol, kvalitetsauditeringer, planer for kvalitetsforbedringer og systematiske evalueringer, som foretages af den øverste ledelse.

#### FINANSIELLE RISICI

Novo Nordisks primære finansielle risici vedrører valutakurser og skattesager. Virksomhedens rapporteringsvaluta og funktionelle valuta er den danske krone, som er bundet til euroen indenfor et snævert spænd på  $\pm 2,25\%$ . Størstedelen af Novo Nordisks salg gennemføres dog i amerikanske dollars, kinesiske yuan, japanske yen og britiske pund. Valutarisici er derfor virksomhedens største finansielle risiko, og betydningen af denne risiko er vokset, i takt med at størrelsen af de internationale markeder og andelen af salg i forskellige valutaer er vokset. For at styre denne risiko afdækker Novo Nordisk forventede fremtidige pengestrømme i udvalgte nøglevalutaer.

I en global virksomhed kan der opstå tvister med skattemyndighederne om interne afregningspriser. Det er Novo Nordisks politik at have et konkurrencedygtigt skatteniveau, dvs. omkring gennemsnittet for sammenlignelige virksomheder, på en ansvarlig måde. Det betyder, at virksomheden betaler relevante skatter i jurisdiktioner, hvor forretningsaktiviteten genererer overskud. Novo Nordisks datterselskaber betaler generelt selskabsskat i de lande, hvor de driver virksomhed. For at styre skattemæssige usikkerheder har virksomheden indgået flerårige aftaler om interne afregningspriser med skattemyndighederne i nøglemarkeder.

#### RISICI FORBUNDET MED INFORMATIONSTEKNOLOGI

Velfungerende it-systemer er kritisk vigtige for Novo Nordisks evne til at arbejde effektivt. De rummer desuden fortrolig information, som kan have væsentlig indvirkning på virksomhedens konkurrencesituation, såfremt den offentliggøres. Novo Nordisk har en informations-sikkerhedsstrategi, der skal begrænse risikoen for, at hackere forårsager skade på systemer og får adgang til kritiske data og systemer. Specifikke tiltag omfatter bl.a. opmærksomhedskampagner, adgangs-kontrol og systemer til opdagelse og forebyggelse af hackerangreb.

#### FORRETNINGSETISKE OG JURIDISKE RISICI

De vigtigste risici indenfor dette område er brud på forretningsetik samt patent- og kontraktstridigheder. Lægemiddelindustrien er stramt reguleret i mange henseender, bl.a. med hensyn til anprisning af produkter og samarbejdet med læger og andet sundhedspersonale.

Novo Nordisk indgik i juni 2011 forlig med det amerikanske justitsministerium om afslutning af to civile søgsmål vedrørende påstået ulovlig markedsføring af NovoSeven®. Som led i forligsaftalen indgik Novo Nordisks amerikanske datterselskab en femårig integritetsaftale (Corporate Integrity Agreement) med generalinspektøren for det amerikanske sundhedsministerium. Det amerikanske datterselskab har i henhold til denne aftale udvidet sit i forvejen omfattende complianceprogram med en række yderligere rapporteringsprocedurer og andre procedurer.

Ovenstående eksempel understreger de potentielle forretningsetiske risici, der er en del af det at være en lægemiddelvirksomhed. For at minimere risikoen for at overtræde nationale og internationale

bestemmelser har Novo Nordisk gennem de sidste 10 år styrket sine globale og regionale programmer for forretningsetisk adfærd.

Novo Nordisks forretningsmodel er baseret på udvikling af nye, innovative produkter, og når virksomheden gør nye betydelige opfindelser, søger den typisk at patentere dem. Risici i forbindelse med immaterielle ejendomsrettigheder opstår eksempelvis, hvis en regering ikke respekterer patenters gyldighed eller ikke er i stand til at hævde patentrettigheder, eller hvis en konkurrent krænker et Novo Nordisk-patent eller anfægter dets gyldighed.

#### NOVO NORDISKS POLITIK FOR RISIKOSTYRING

I Novo Nordisk vil vi proaktivt anvende risikostyring til at sikre fortsat vækst i vores forretning og til at beskytte vores medarbejdere, aktiver og omdømme. Det betyder, at vi vil:

- anvende et effektivt og integreret risikostyringssystem, samtidig med at den forretningsmæssige fleksibilitet bevares
- identificere og vurdere væsentlige risici forbundet med vores forretning
- overvåge, styre og begrænse risici.

Læs mere om Novo Nordisks risikostyringsproces på [novonordisk.com/about\\_us](https://novonordisk.com/about_us).





# AKTIER

## OG KAPITALSTRUKTUR

Novo Nordisk søger gennem åben og proaktiv kommunikation at skabe grundlaget for en retvisende og effektiv kursdannelse på virksomhedens aktier.

### AKTIEKAPITAL OG EJERFORHOLD

Novo Nordisks samlede aktiekapital på 520.000.000 kr. er fordelt på en A-aktiekapital på nominelt 107.487.200 kr. og en B-aktiekapital på nominelt 412.512.800 kr. A-aktierne er ikke børsnoterede og ejes af Novo A/S, som er et unoteret dansk aktieselskab ejet 100% af Novo Nordisk Fonden. Fonden har to formål: at udgøre et stabilt fundament for den erhvervs-mæssige og forskningsmæssige virksomhed, som drives af selskaberne i Novo Gruppen (hvoraf Novo Nordisk er det største), og at yde støtte til videnskabelige og humanitære formål. I henhold til Fondens vedtægter kan A-aktierne ikke sælges. Novo A/S ejede desuden pr. 31. december 2015 B-aktiekapital svarende til nominelt 32.762.800 kr. Novo Nordisks B-aktier er noteret på Nasdaq Copenhagen og på New York Stock Exchange i form af American Depositary Receipts (ADR'er). Novo Nordisks A- og B-aktier regnes i enheder a 0,20 kr. Hver A-aktie giver 200 stemmer, og hver B-aktie giver 20 stemmer. Da B-aktierne er ihænde-haverpapirer, foreligger der ingen komplet opgørelse over deres placering. På baggrund af kendte informationer om selskabets aktionærforhold pr. 31. december 2015 anslås Novo Nordisks aktier at være fordelt som vist i diagrammet på modstående side. Pr. 31. december 2015 udgjorde noterede B-aktier i frit omløb 89,5% (hvoraf ca. 13,1% er noteret som ADR'er) eksklusive Novo A/S' aktiebeholdning og Novo Nordisks beholdning af egne aktier, som pr. 31. december 2015 udgjorde nominelt 10.433.741 kr.

### KAPITALSTRUKTUR OG UDBYTTETPOLITIK

Novo Nordisks bestyrelse og koncerndirektion finder, at den nuværende kapital- og aktiestruktur er hensigtsmæssig for aktionærerne og virksomheden, da den giver strategisk fleksibilitet til at forfølge Novo Nordisks vision. Novo Nordisks strategi for kapitalstrukturen sikrer en god balance mellem den langsigtede værdiskabelse for aktionærerne og et konkurrencedygtigt udbytte for aktionærerne på kort sigt. I tilfælde af overskydende kapital efter finansiering af organiske vækstmuligheder og potentielle virksomhedsovertagelser vil Novo Nordisk typisk tilbagebetale overskydende kapital til investorerne. Novo Nordisks udbyttepolitik anvender et benchmark for lægemiddelindustrien for at sikre, at udbytteandelen er konkurrencedygtig, og supplerer med aktietilbagekøbsprogrammer. Bestyrelsen forventer at indføre halvårlig

udbyttebetaling i august 2016. Som det fremgår af diagrammet til højre, har Novo Nordisk løbende øget såvel udbytteandel som udbyttebetaling gennem de sidste fem år. Udbyttet for 2014, som blev udbetalt i marts 2015, svarede til 5,00 kr. pr. A- og B-aktie a 0,20 kr. samt for ADR'er. Det svarer til en udbytteandel på 48,7%, hvilket stort set er på linje med gennemsnittet på 54% i 2014 for gruppen af lægemiddelvirksomheder. Novo Nordisk normalt sammenligner sig med Bestyrelsen vil foreslå en udbyttebetaling for 2015 på 6,40 kr., svarende til en udbytteandel på 46,6%. Korrigeret for det delvise salg af NNIT A/S, hvor nettoresultateffekten blev tilbagebetalt til aktionærerne gennem en udvidelse af aktietilbagekøbsprogrammet for 2015 på 2,5 mia. kr., bliver udbytteandelen 50,0%. Der udbetales ikke udbytte på selskabets beholdning af egne aktier. Aktionærer med forespørgsler vedrørende udbyttebetaling og aktionærkonti bedes rette henvendelse til Novo Nordisks Investorservice. Læs mere på [bagsiden](#).

Novo Nordisk har i 12-måneders-perioden, der startede 30. januar 2015, tilbagekøbt aktier til en værdi af 17,5 mia. kr. Aktietilbagekøbsprogrammet har siden 2008 primært været gennemført i henhold til bestemmelserne i Europa-Kommissionens forordning nr. 2273/2003 af 22. december 2003 (den såkaldte Safe Harbour Regulation). I dette program udpeger Novo Nordisk finansielle institutioner som lead managers til at gennemføre aktietilbagekøbsprogrammet uafhængigt af og uden indflydelse fra Novo Nordisk.

### AKTIENTILBAGEKØBSPROGRAM FOR 2016/2017

Novo Nordisk har besluttet at gennemføre et nyt aktietilbagekøbsprogram for de næste 12 måneder med en forventet samlet tilbagekøbsværdi af B-aktier svarende til en konstantværdi på op til 14 mia. kr. Novo Nordisk forventer at gennemføre størstedelen af det nye aktietilbagekøbsprogram i henhold til Safe Harbour Regulation. Størrelsen på aktietilbagekøbsprogrammet for 2016 er korrigeret for påvirkningen fra den halvårige udbyttebetaling. Bestyrelsen vil på generalforsamlingen i marts 2016 foreslå en yderligere reduktion af B-aktiekapitalen svarende til ca. 1,92% af den samlede aktiekapital gennem annullering af 50.000.000 egne aktier. Efter gennemførelsen af aktiekapitalreduktionen

vil Novo Nordisks aktiekapital beløbe sig til 510.000.000 kr. fordelt på en A-aktiekapital på 107.487.200 kr. og en B-aktiekapital på 402.512.800 kr.

### UDVIKLINGEN I AKTIEKURSEN

Kursen på Novo Nordisk-aktien steg med 54% mellem lukkekursen i 2014 på 260,3 kr. og lukkekursen pr. 30. december 2015 på 399,9 kr. Til sammenligning steg det danske OMXC20 CAP-indeks med 29% og gruppen af sammenlignelige lægemiddelvirksomheder med 4% i 2015. Stigningen i Novo Nordisks aktiekurs i 2015 afspejler virksomhedens fortsatte førerposition på det voksende marked for diabetesbehandling kombineret med en fortsat forbedring i overskudsgraden af den primære drift og fremdriften i vigtige projekter indenfor forskning og udvikling, herunder godkendelsen af Tresiba® i USA og fremdriften i den kliniske udvikling af den nye GLP-1-analog semaglutid. Den samlede markedsværdi af Novo Nordisks B-aktier, eksklusive egne aktier, var 804 mia. kr. pr. 30. december 2015.

### KOMMUNIKATION MED AKTIONÆRERNE

For at holde investorerne orienteret om virksomhedens resultater og udviklingen i de kliniske forskningsprogrammer afholder Novo Nordisk telekonferencer med deltagelse af koncerndirektionen efter vigtige begivenheder og efter alle regnskabsmeddelelser. Koncern-direktionen og Investor Relations-teamet rejser desuden ofte ud for at sikre, at alle investorer med større beholdninger af Novo Nordisk-aktier har mulighed for regelmæssigt at møde repræsentanter for virksomheden, ligesom også andre, herunder potentielle investorer, har mulighed for at møde ledelsen og Investor Relations-teamet.

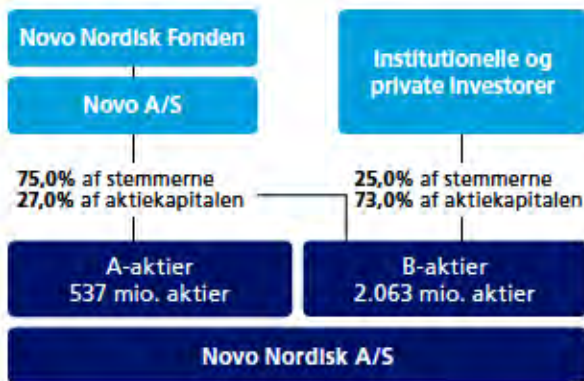
### ANALYTIKERDÆKNING

Novo Nordisk dækkes i dag af 37 sell side-analytikere, inklusive de førende globale investeringsbanker, som regelmæssigt udarbejder analyserapporter om Novo Nordisk. En liste over analytikere, der dækker Novo Nordisk, kan ses på [novonordisk.com](http://novonordisk.com) under 'Investors'. Øvrig information tilgængelig på websitet omfatter bl.a. selskabsmeddelelser fra 1995 og frem, de seneste finansielle, sociale og miljømæssige regnskaber, en kalender over begivenheder af interesse for investorer, investorpræsentationer samt baggrundsmateriale.



## AKTIER OG EJERFORHOLD

### EJERSTRUKTUR

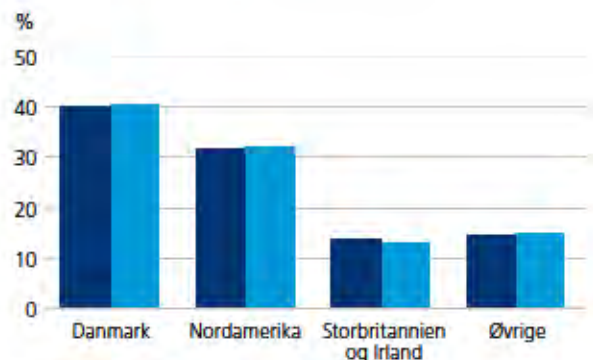


Note: Egne aktier er inkluderet i aktiekapitalen, men har ingen stemmeret.

### GEOGRAFISK FORDELING AF AKTIONÆRER\*

% af aktiekapital

■ 2014 ■ 2015



\* Beregnet ud fra aktionærernes registrerede hjemland.

## AKTIEKURSUDVIKLING

### AKTIEKURSUDVIKLING

Novo Nordisk-aktien i forhold til sammenlignelige virksomheder

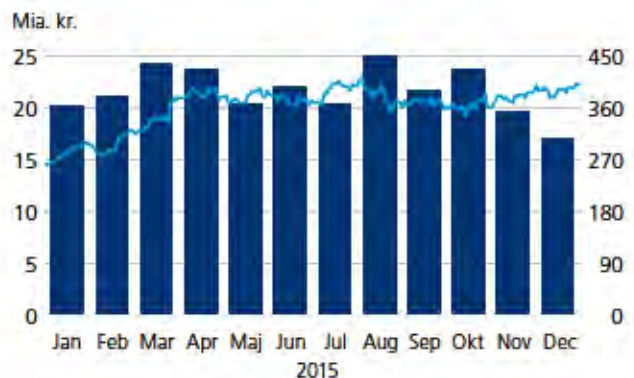
— Novo Nordisk — Sammenlignelige lægemiddelvirksomheder\* — OMXC20 CAP



\* Sammenlignelige lægemiddelvirksomheder omfatter AstraZeneca, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, J&J, Merck & Co, Novartis, Pfizer, Roche, Sanofi og Teva.

### KURSUDVIKLING OG MÅNEDLIG OMSÆTNING AF NOVO NORDISKS B-AKTIER

■ Omsætning af B-aktier (venstre) — Lukkekurs på Novo Nordisks B-aktie (højre)



## KONTANT AFKAST TIL AKTIONÆRER

### ÅRLIGT KONTANT AFKAST TIL AKTIONÆRER

■ Udbytte ■ Aktietilbagekøb — Frie pengestrømme



Note: Udbytte er anført i det år, hvor udbyttebetaling har fundet sted.

### UDVIKLING I AKTIEKAPITALEN

■ Aktiekapital





# GOD SELSKABSLEDELSE

I 2015 nåede bestyrelsen de mål for mangfoldighed, den havde sat i 2013, og løftede derfor sin mangfoldighedsambition yderligere ved at sætte nye mål for 2019. Bestyrelsen etablerede et vederlagsudvalg med henblik på at forbedre processen for udarbejdelse af forslag til aflønning af medlemmerne af bestyrelsen og koncerndirektionen. Bestyrelsen besluttede endvidere at reorganisere koncerndirektionen for at styrke bestyrelsens indsigt i Novo Nordisks internationale forretning og yderligere understøtte udviklingen af dygtige ledertalenter.

## LEDELSESSTRUKTUR

### AKTIONÆRER

Aktionærerne har den endelige myndighed over selskabet og udøver deres ret til at træffe beslutninger på generalforsamlingerne. Beslutninger kan generelt vedtages ved simpelt flertal. Beslutninger om vedtægtsændringer kræver vedtagelse med to tredjedele af de afgivne stemmer og den repræsenterede aktiekapital – medmindre selskabsloven stiller andre krav til vedtagelsen.

På den ordinære generalforsamling godkender aktionærerne årsrapporten og eventuelle ændringer til vedtægterne. Aktionærerne vælger også medlemmer til bestyrelsen foruden den uafhængige revisor.

Novo Nordisks aktiekapital er opdelt i A- og B-aktier. De særlige rettigheder, der knytter sig til A-aktierne, er bl.a. fortegningsret i tilfælde af udvidelse af A-aktiekapitalen og forkøbsret i tilfælde af salg af A-aktier, mens B-aktier har fortrinsret ved likvidation.\* Læs mere om aktier og kapitalstruktur på [s. 44](#).

### BESTYRELSE

Novo Nordisk har en todelt ledelsesstruktur, som består af bestyrelsen og koncerndirektionen. De to organer er uafhængige af hinanden, og ingen personer er medlem af dem begge. Bestyrelsen fastlægger den overordnede strategi, følger op på dens implementering og overvåger virksomhedens resultater. Den er desuden ansvarlig for at sikre en forsvarlig ledelse og organisation og medvirker dermed aktivt til at udvikle selskabet som en fokuseret, bæredygtig, globalt arbejdende lægemiddelvirksomhed. Bestyrelsen fører tilsyn med koncerndirektionens beslutninger og dispositioner. Bestyrelsen kan også udstede nye aktier eller tilbagekøbe aktier i henhold til

de bemyndigelser, den har fået af generalforsamlingen, og som er noteret i referatet. Generalforsamlingsreferater kan ses på [novonordisk.com/about\\_us](http://novonordisk.com/about_us). Bestyrelsen består af 12 medlemmer, hvoraf otte er valgt af generalforsamlingen, og fire er valgt af medarbejderne i Danmark. Der blev afholdt syv bestyrelsesmøder i 2015.

De generalforsamlingsvalgte bestyrelsesmedlemmer vælges for ét år ad gangen og kan genvælges. Bestyrelsesmedlemmer skal udtræde af bestyrelsen ved den første generalforsamling efter det fyldte 70.

år. Fem af de otte generalforsamlingsvalgte bestyrelsesmedlemmer er uafhængige i henhold til definitionen i de danske anbefalinger for god selskabsledelse. Læs mere på [s. 52-53](#).

Nomineringsudvalget fremlægger forslag til nominering af bestyrelsesmedlemmer for bestyrelsen, hvor der lægges vægt på de nødvendige kompetencer i henhold til bestyrelsens kompetenceprofil og resultatet af

\* A-aktier har fortrinsret til udbytte under 0,5%. B-aktier har fortrinsret til udbytte mellem 0,5 og 5%. I praksis modtager A- og B-aktier dog samme udbyttebeløb pr. aktie. På den ordinære generalforsamling i marts 2015 blev det vedtaget at udbetale 5 kr. i udbytte pr. aktie a 0,20 kr., svarende til en udbytteprocent på 2.500%, hvilket gør vedtægternes skelnen mellem udbyttekategorier mindre relevant.



bestyrelsens selvevaluering. Interne eller eksterne konsulenter faciliterer denne selvevaluering, som baseret på spørgeskemaer danner udgangspunkt for vurderingen af bestyrelsens sammensætning og medlemmernes kompetencer, herunder om de enkelte medlemmer af bestyrelsen og koncerndirektionen deltager aktivt i bestyrelsens drøftelser og bidrager med egne vurderinger.

Det er bestyrelsens ambition, at der skal være mangfoldighed med hensyn til køn og nationalitet for at sikre, at drøftelserne inddrager perspektiver, der afspejler den komplekse globale lægemiddelindustri. P.t. er tre generalforsamlingsvalgte bestyrelsesmedlemmer kvinder, og seks af de otte generalforsamlingsvalgte bestyrelsesmedlemmer er af anden nationalitet end dansk. I 2015 løftede bestyrelsen sin mangfoldighedsambition yderligere og opstillede nye mål for mangfoldighed. Det er nu målet, at bestyrelsen i 2019 består af mindst to generalforsamlingsvalgte bestyrelsesmedlemmer af nordisk nationalitet, mindst to generalforsamlingsvalgte bestyrelsesmedlemmer af anden nationalitet end nordisk og mindst fire generalforsamlingsvalgte bestyrelsesmedlemmer af hvert køn. I henhold til årsregnskabslovens § 99b gør Novo Nordisk rede for sin mangfoldighedspolitik, målsætning og status for opfyldelsen af måltallene i FN's Global Compact-rapport Communication on Progress, som kan ses på [novonordisk.com/annualreport](https://novonordisk.com/annualreport).

Bestyrelsens selvevaluering i 2015 blev gennemført internt og viste en fortsat stærk præstation af bestyrelsen og koncerndirektionen. Evalueringen resulterede desuden i identifikation af en række områder indenfor forskning, produktion og salg, hvor der vil blive givet mere indsigt til bestyrelsen. Kriterierne for bestyrelsesmedlemmerne er integritet, ansvarlighed, fairness, finansiell indsigt, engagement og innovationslyst, som understøtter fortsat overholdelse af Novo Nordisk Way. Medlemmerne forventes også at have erfaring med ledelse af store virksomheder, der udvikler, fremstiller og markedsfører produkter og serviceydelser globalt. Kompetenceprofilen, som indeholder kriterierne for nominering, kan ses på [novonordisk.com/about\\_us](https://novonordisk.com/about_us).

virksomhedens økonomi og ledelse. Andre opgaver omfatter gennemgang af porteføljen af investeringer i materielle anlægsaktiver. Generalforsamlingen genvalgte i marts 2015 Göran Ando som bestyrelsesformand og Jeppe Christiansen som næstformand. Læs mere om formandskabets aktiviteter på [novonordisk.com/about\\_us](https://novonordisk.com/about_us).

#### REVISIONSUDVALG

De fire medlemmer af revisionsudvalget er valgt af bestyrelsen blandt dens medlemmer. I henhold til den amerikanske lov om udstedelse af værdipapirer (Securities Exchange Act) anses to medlemmer for uafhængige, og to medlemmer er fritaget for uafhængighedskravet. Derudover er to medlemmer udpeget som regnskabseksperter i henhold til det amerikanske børstilsyns (SEC) definitioner. I henhold til dansk lovgivning anses to medlemmer for uafhængige, og heraf anses ét medlem for regnskabsekspert. Ét af medlemmerne er medarbejderrepræsentant. Revisionsudvalget bistår bestyrelsen med at føre tilsyn med de eksterne revisorer, den interne revisionsfunktion, proceduren for håndtering af klager vedrørende forhold i forbindelse med regnskabsaflæggelse, intern regnskabskontrol, revision eller finansiell rapportering og forretningsetik, den finansielle, sociale og miljømæssige rapportering, overholdelse af forretningsetik, vurdering af investeringer samt langsigtede incitamentsordninger og informationssikkerhed. Bestyrelsen valgte i 2015 Liz Hewitt som formand og Jeppe Christiansen, Sylvie Grégoire og Stig Strøbæk som medlemmer. Eivind Kolding blev valgt som observatør i revisionsudvalget. Læs mere om revisionsudvalgets aktiviteter på [novonordisk.com/about\\_us](https://novonordisk.com/about_us).

#### NOMINERINGSUDVALG

Nomineringsudvalget består af fem medlemmer. Tre medlemmer anses for uafhængige, mens ét medlem er medarbejderrepræsentant. Nomineringsudvalget bistår bestyrelsen med at føre tilsyn med bestyrelsens kompetenceprofil og sammensætning, nominering af kandidater til bestyrelsen og bestyrelsesudvalg og andre opgaver på ad hoc-basis som specifikt besluttet af bestyrelsen. Bestyrelsen valgte i 2015 Göran Ando som formand og Bruno Angelici, Liz Hewitt, Liselotte

I henhold til dansk lovgivning er Novo Nordisks medarbejdere i Danmark berettiget til at have et antal repræsentanter i bestyrelsen svarende til halvdelen af antallet af generalforsamlingsvalgte bestyrelsesmedlemmer. Medarbejderne valgte i 2014 fire medlemmer til bestyrelsen – to mænd og to kvinder, der alle er danskere. De medarbejdervalgte bestyrelsesmedlemmer vælges for fire år ad gangen og har samme rettigheder, pligter og ansvar som de generalforsamlingsvalgte bestyrelsesmedlemmer.

#### FORMANDSKAB

Bestyrelsesformanden og næstformanden vælges direkte af generalforsamlingen. Formandskabet udfører en række administrative opgaver, herunder planlægning af bestyrelsesmøder, så der er balance i arbejdet med fastlæggelse af overordnede strategier og tilsyn med

Hyveled og Mary Szela som medlemmer. Læs mere om nomineringsudvalgets aktiviteter på [novonordisk.com/about\\_us](https://novonordisk.com/about_us).

#### VEDERLAGSUDVALG

Bestyrelsen etablerede et vederlagsudvalg i 2015. Vederlagsudvalget består af fem medlemmer. To medlemmer anses for uafhængige, og ét medlem er medarbejderrepræsentant. Udvalgets formand er ikke uafhængig. Vederlagsudvalget bistår bestyrelsen med at føre tilsyn med aflønningsprincipperne samt det faktiske vederlag til medlemmerne af bestyrelsen, bestyrelsesudvalget og koncerndirektionen. Bestyrelsen valgte i 2015 Göran Ando som formand og Jeppe Christiansen, Thomas Paul Koestler, Søren Thuesen Pedersen og Mary Szela som medlemmer. Læs mere om vederlagsudvalgets aktiviteter på [novonordisk.com/about\\_us](https://novonordisk.com/about_us).



**KONCERNDIREKTION**

Koncerndirektionen er ansvarlig for selskabets daglige ledelse. En koncerndirektør fratrådte i 2015, og bestyrelsen udnævnte fire nye koncerndirektører, idet lederne af koncernens forretningsaktiviteter i USA, Europa og International Operations samt Product Supply blev forfremmet til medlemmer af koncerndirektionen. De fire nye koncerndirektører er ikke registreret i Erhvervsstyrelsen. Koncerndirektionen består nu af den administrerende direktør og otte koncerndirektører. De er ansvarlige for den overordnede forretningsførelse

og alle forhold vedrørende driften, for organisering af virksomheden, fordeling af ressourcer, fastlæggelse og implementering af strategier og politikker, retning og mål samt rettidig rapportering og information til bestyrelsen og Novo Nordisks interessenter. Koncerndirektionen mødes mindst én gang om måneden og ofte hyppigere. Bestyrelsen udpeger koncerndirektørerne og fastlægger deres aflønning. Formandskabet fører tilsyn med koncerndirektørernes indsats.

**KODEKSER OG PRAKSIS FOR GOD SELSKABSLEDELSE**

\* Formandskabet vælges direkte af generalforsamlingen.

**ASSURANCE**

Virksomhedens regnskabsaflæggelse og de interne kontroller af de finansielle rapporteringsprocesser revideres af et uafhængigt revisionsfirma, som er valgt på virksomhedens ordinære generalforsamling. Som led i Novo Nordisks målsætning om social og miljømæssig ansvarlighed medtager virksomheden efter eget valg en revisorerklæring om social og miljømæssig rapportering i årsrapporten. Revisor vurderer, hvorvidt den sociale og miljømæssige rapportering dækker aspekter, der vurderes som værende væsentlige, og verificerer de interne processer til kontrol af rapporteringen.

Novo Nordisks interne revisionsfunktion yder uafhængig og objektiv revision primært angående intern kontrol med finansielle processer, it og forretningsetik. For at sikre, at den interne finansielle revisionsfunktion arbejder uafhængigt af koncerndirektionen, godkendes dens charter, revisionsplan og budget af revisionsudvalget.

Tre andre former for intern revision – kvalitetsrevision, organisationsrevision og revision af ledelsesværdier, kaldet faciliteringer – er med til at sikre, at virksomheden overholder høje kvalitetsstandarder og efterlever Novo Nordisk Way.

**EFTERLEVELSE AF KODEKSER FOR GOD SELSKABSLEDELSE**

Novo Nordisks B-aktier er noteret på Nasdaq Copenhagen og på New York Stock Exchange (NYSE) i form af American Depositary Receipts (ADR'er). De gældende kodekser for god selskabsledelse fra de to børser og en gennemgang af Novo Nordisks efterlevelse af disse kan ses på [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

Novo Nordisk har desuden beskrevet virksomhedens efterlevelse af de danske anbefalinger for god selskabsledelse i henhold til årsregnskabslovens § 107b på [novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html](http://novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html). Novo Nordisk efterlever alle på nær følgende:

- Ansvar for vederlagspolitikken gældende for medarbejderne generelt er placeret hos koncerndirektionen og ikke hos vederlagsudvalget.
- Tre koncerndirektørkontrakter, som er indgået før 2008, tillader fratrædelsesgodtgørelse på mere end 24 måneders fast grundløn plus pensionsbidrag.
- Flertallet af medlemmerne af henholdsvis revisions- og vederlagsudvalget er ikke uafhængige.

Novo Nordisk følger de gældende standarder for god selskabsledelse, som er fastlagt af NYSE for udenlandske børsnoterede private udstedere. Som kontrolleret virksomhed er Novo Nordisk ikke forpligtet til at opfylde alle NYSE's standarder. Endvidere må Novo Nordisk som udenlandsk privat udsteder følge hjemlandets praksis, hvilket gør sig gældende med hensyn til krav vedrørende uafhængighed, revisionsudvalg, aktiebaserede aflønningsordninger, adfærds- og etikkodekser samt certificering af den administrerende direktør. En oversigt over de væsentlige områder, hvor Novo Nordisks praksis for god selskabsledelse afviger fra NYSE's gældende standarder for god selskabsledelse, kan ses på [novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html](http://novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html).

Novo Nordisk er en del af Novo Gruppen og efterlever charteret for virksomhederne i Novo Gruppen, som er tilgængeligt på [novo.dk](http://novo.dk). Alle beslutninger om strategiske og forretningsmæssige spørgsmål træffes dog udelukkende af Novo Nordisks bestyrelse og koncerndirektion.



# AFLØNNING

På generalforsamlingen i marts 2015 blev det faste basisvederlag til bestyrelsen forhøjet fra 500.000 kr. til 600.000 kr. efter ikke at være blevet justeret i fire år.

Aflønningen af bestyrelsen og koncerndirektionen sammenholdes hvert år med niveauet i nordiske selskaber samt europæiske lægemiddelvirksomheder, der er sammenlignelige med Novo Nordisk i størrelse, kompleksitet og markedsværdi. Vederlagsudvalget fremlægger resultatet for Novo Nordisks bestyrelse på bestyrelsesmødet i oktober. Novo Nordisk stræber efter enkelhed i sammensætningen af lønpakken, og aflønningsprincipperne tjener som retningslinjer for aflønningen af bestyrelsen og koncerndirektionen. Disse kan ses på [novonordisk.com/about-novo-nordisk/corporate-governance/remuneration.html](http://novonordisk.com/about-novo-nordisk/corporate-governance/remuneration.html).

## AFLØNNING AF BESTYRELSESMEDELLER

Vederlaget til Novo Nordisks bestyrelse består af et fast basisvederlag, et multiplum af det faste basisvederlag til formandskabet og medlemmerne af virksomhedens udvalg, vederlag for ad hoc-opgaver samt rejsegodtgørelse. Læs mere om bestyrelsens aflønning på [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

På bestyrelsens møde i oktober vedtages anbefalinger vedrørende niveauet for vederlaget i det kommende regnskabsår. I forbindelse med godkendelsen af årsrapporten

godkender bestyrelsen det faktiske vederlag for det forgangne regnskabsår og det anbefalede niveau for vederlaget i det aktuelle regnskabsår. Disse fremlægges derefter til godkendelse på generalforsamlingen.

## REJSEGODTGØRELSE OG OMKOSTNINGER

Alle bestyrelsesmedlemmer, som har bopæl udenfor Danmark, modtager en fast rejsegodtgørelse pr. bestyrelsesmøde. Udgifter til f.eks. rejse og ophold i forbindelse med bestyrelsesmøder samt til videreuddannelse refunderes. Novo Nordisk betaler desuden sociale sikringsydelser pålagt af fremmede myndigheder. Læs mere om rejsegodtgørelse og omkostninger på [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

## AFLØNNING AF KONCERNDIREKTIONEN

Vederlagsudvalget fremsætter forslag om koncerndirektionens aflønning, som godkendes af bestyrelsen. Koncerndirektørernes lønpakke består af en fast grundløn, en kontantbaseret incitamentsordning, en aktiebaseret incitamentsordning, et pensionsbidrag og andre ydelser. Ind- og udstationerede koncerndirektørers lønpakke er under det midlertidige ophold i værtslandet baseret på en nettoløn, der er tilpasset værtslandets forhold, samt dækning af visse omkostninger som f.eks. flytning, bolig og skole. Opdelingen

i faste og variable lønandele har til formål at sikre, at en rimelig del af lønnen er præstationsrelateret, samtidig med at fornuftige, langsigtede beslutninger fremmes med henblik på virksomhedens målopfyldelse. Alle incitamentsbaserede ydelser kan kræves tilbagebetalt i henhold til de såkaldte clawback-bestemmelser, hvis det viser sig, at udbetalingen er sket på grundlag af oplysninger, der efterfølgende dokumenteres som værende åbenlyst fejlagtige.

## FAST GRUNDLØN

Den faste grundløn har til formål at tiltrække og fastholde koncerndirektører med de faglige og personlige kompetencer, der er nødvendige for at fremme virksomhedens resultater.

## KONTANTBASERET INCITAMENTSORDNING

Den kortsigtede kontantbaserede incitamentsordning har til formål at belønne individuelle præstationer. Incitamentsordningen er baseret på opnåelse af en række foruddefinerede kortsigtede finansielle samt proces-, medarbejder- og kunderelaterede mål, der relaterer sig til koncerndirektørens funktionsområde og er knyttet til målene i virksomhedens Balanced Scorecard, samt opnåelse af en række personlige mål, der

FORTSÆTTES ►

## BESTYRELSEN

BASISVEDERLAGET TIL BESTYRELSENS MEDELLER VAR I 2015 PÅ 600.000 KR. (500.000 KR. I 2014).

Mio. kr.	2015				2014			
	Fast basisvederlag	Vederlag for ad hoc-opgaver og udvalgsarbejde	Rejsegodtgørelse	I alt	Fast basisvederlag	Vederlag for ad hoc-opgaver og udvalgsarbejde	Rejsegodtgørelse	I alt
Göran Ando <sup>3,4</sup> (BF, NF og VF)	1,7	–	0,1	1,8	1,5	–	0,1	1,6
Jeppe Christiansen (BN, RM og VM)	1,2	0,3	–	1,5	1,0	–	–	1,0
Bruno Angelici (NM)	0,6	0,1	0,1	0,8	0,5	0,1	0,1	0,7
Sylvie Grégoire <sup>1</sup> (RM)	0,5	0,2	0,2	0,9	–	–	–	–
Liz Hewitt (RF og NM)	0,6	0,7	0,1	1,4	0,5	0,4	0,1	1,0
Liselotte Hyveled <sup>1</sup> (NM)	0,6	0,1	–	0,7	0,4	–	–	0,4
Thomas Paul Koestler (VM)	0,6	0,1	0,2	0,9	0,5	–	0,3	0,8
Eivind Kolding <sup>1</sup> (RO)	0,5	–	–	0,5	–	–	–	–
Anne Marie Kverneland	0,6	–	–	0,6	0,5	–	–	0,5
Søren Thuesen Pedersen (VM)	0,6	0,1	–	0,7	0,5	0,1	–	0,6
Stig Strøbæk (RM)	0,6	0,3	–	0,9	0,5	0,3	–	0,8
Mary Szela <sup>1</sup> (NM og VM)	0,5	0,2	0,2	0,9	–	–	–	–
Helge Lund <sup>2</sup>	0,1	0,1	0,1	0,3	0,4	0,2	0,1	0,7
Hannu Ryöppönen <sup>2</sup>	0,1	0,1	0,1	0,3	0,5	0,5	0,1	1,1
Henrik Görtler <sup>2</sup>	–	–	–	–	0,1	–	–	0,1
Ulrik Hjulmand-Lassen <sup>2</sup>	–	–	–	–	0,1	–	–	0,1
<b>I alt</b>	<b>8,8</b>	<b>2,3</b>	<b>1,1</b>	<b>12,2<sup>5</sup></b>	<b>7,0</b>	<b>1,6</b>	<b>0,8</b>	<b>9,4<sup>5</sup></b>

BF = Bestyrelsesformand, BN = Bestyrelsesnæstformand, RF = Formand for revisionsudvalget, RM = Medlem af revisionsudvalget, RO = Observatør i revisionsudvalget, NF = Formand for nomineringsudvalget, NM = Medlem af nomineringsudvalget, VF = Formand for vederlagsudvalget, VM = Medlem af vederlagsudvalget.

1. Liselotte Hyveled blev første gang valgt i marts 2014. Sylvie Grégoire, Eivind Kolding og Mary Szela blev første gang valgt i marts 2015. 2. Helge Lund og Hannu Ryöppönen udtrådte i marts 2015. Henrik Görtler og Ulrik Hjulmand-Lassen udtrådte i marts 2014. 3. Novo Nordisk ydede sekretærmæssig assistance til formanden i Danmark og Storbritannien. 4. Da Göran Ando er formand for bestyrelsen, har han ikke modtaget vederlag som formand for nomineringsudvalget og vederlagsudvalget. 5. Novo Nordisk har desuden betalt sociale bidrag svarende til under 1 mio. kr. (under 1 mio. kr. i 2014).



relaterer sig til den enkelte koncerndirektør og dennes stilling. De kortsigtede mål for den administrerende direktør fastsættes af bestyrelsesformanden, mens målene for de øvrige medlemmer af koncerndirektionen fastsættes af den administrerende direktør. Formandskabet vurderer på basis af input fra den administrerende direktør, i hvor høj grad den enkelte koncerndirektør har nået målene.

I juni 2015 fastsatte bestyrelsen en maksimal bonustildeling for 2015 svarende til maksimalt 12 måneders fast grundløn plus pensionsbidrag for den administrerende direktør, maksimalt 8,5 måneders fast grundløn plus pensionsbidrag for ind- og udstationerede koncerndirektører samt maksimalt 8 måneders fast grundløn plus pensionsbidrag for øvrige medlemmer af koncerndirektionen med base i Danmark.

#### AKTIEBASEREDE INCITAMENTSORDNINGER

Den langsigtede aktiebaserede incitamentsordning har til formål at fremme koncerndirektionens samlede indsats og sikre, at koncerndirektørernes interesser er sammenfaldende med aktionærernes. Aktiebaserede incitamentsordninger er knyttet til såvel finansielle som ikke-finansielle mål. Den langsigtede incitamentsordning er baseret på en beregning af den finansielle værdiskabelse sammenholdt med den forventede præstation. I overensstemmelse med Novo Nordisks langsigtede finansielle mål baseres beregningen af den finansielle værdiskabelse på det rapporterede resultat af primær drift efter skat reduceret med et vægtet kapitalafkastkrav af den gennemsnitlige investerede kapital.

Salgsvæksten er i vid udstrækning styrende for virksomhedens økonomiske udvikling og dermed den finansielle værdiskabelse. Den genererede finansielle værdi kan således blive justeret i negativ retning, hvis salgspresentationen er lavere end budgetteret. Den beregnede finansielle værdiskabelse justeres yderligere, hvis visse ikke-finansielle mål ikke nås. De ikke-finansielle mål fastsættes på basis af en vurdering af de målsætninger, der anses for særligt vigtige for opnåelsen af virksomhedens vigtigste på langt sigt. Foruden de finansielle mål og målet for salgsvækst havde Novo Nordisk i 2015 yderligere 16 mål, der var knyttet til virksomhedens Balanced Scorecard i kategorierne forskning og udvikling, kvalitet, patienter, medarbejdere, miljø og omdømme. Målene indenfor forskning og udvikling var relateret til specifikke milepæle såsom indsendelse af registreringsansøgninger til de regulatoriske myndigheder i USA og Europa indenfor en given tidshorisont, opnåelse af markedsføringstilladelser, gennemførelse af studier samt videreførelse af et fastlagt antal produktkandidater til udviklingsfasen fra den tidlige forskning. Målene indenfor kvalitet var relateret til tilbagekaldelser og Warning

Letters, og målene indenfor miljø var relateret til CO<sub>2</sub>-emissioner fra energiforbruget i produktionen.

Baseret på disse principper overføres en andel af den beregnede finansielle værdiskabelse til en fælles pulje for deltagerne, der omfatter koncerndirektionen og øvrige direktører, tilsammen kaldet Senior Management Board.

I marts 2015 fastsatte bestyrelsen et maksimum for 2015 for koncerndirektionen pr. 1. marts 2015 svarende til 12 måneders fast grundløn inklusive pensionsbidrag for den administrerende direktør og op til 9 måneders fast grundløn plus pensionsbidrag for direktionens øvrige medlemmer. Hvis målene for den finansielle værdiskabelse og salgsvæksten nås, og målopfyldelsen er på mindst 85% for de ikke-finansielle mål, vil tildelingen til den fælles pulje svare til 6 måneders grundløn plus pensionsbidrag for den administrerende direktør og 4,5 måneders grundløn plus pensionsbidrag for

direktionens øvrige medlemmer. Læs mere om Novo Nordisks aktiebaserede incitamentsordninger på [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

#### PENSION

Der betales pensionsbidrag for at give koncerndirektørerne mulighed for at spare op til pension.

#### ANDRE YDELSER

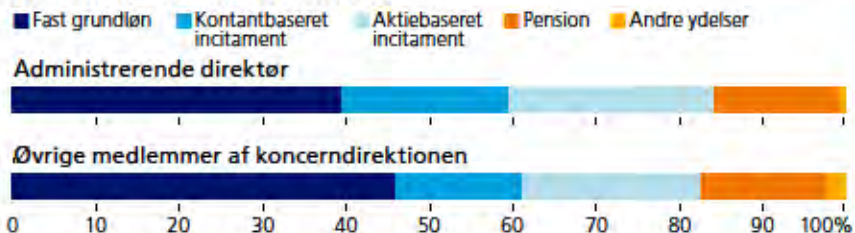
Der tillægges andre ydelser for at sikre, at den samlede aflønning er konkurrencedygtig og i overensstemmelse med lokal praksis.

#### FRATRÆDELSESODTGORELSE

Novo Nordisk kan opsigse koncerndirektører med 12 måneders varsel. Koncerndirektører kan opsiges deres stilling i Novo Nordisk med seks måneders varsel. Udover løn i opsigelsesperioden er koncerndirektørerne berettiget til en fratrædelsesgodtgørelse som beskrevet i oversigten over sammensætningen af direktionens aflønning. Læs mere om fratrædelsesgodtgørelse i Novo Nordisk på [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

## SAMMENSETNING AF DIREKTIONENS AFLØNNING

### FULD RESULTATOPNÅELSE I 2015



## LØNPAKKENS BESTANDDELE

Aflønning	Bestyrelse	Koncerndirektion	Bemærkninger vedrørende koncerndirektionen
Fast vederlag/grundløn	✓	✓	Udgør 25–50% af den samlede lønpakkes værdi.*
Vederlag for udvalgsarbejde	✓	✗	
Vederlag for ad hoc-opgaver	✓	✗	
Kontantbaseret incitamentsordning	✗	✓	Op til otte en halv måneders fast grundløn + pensionsbidrag pr. år for ind- og udstationerede koncerndirektører. 8–12 måneders fast grundløn + pensionsbidrag for koncerndirektører med bopæl i Danmark
Aktiebaseret incitamentsordning	✗	✓	9–12 måneders fast grundløn plus pensionsbidrag pr. år.**
Pension	✗	✓	25% af fast grundløn og kontantbaseret incitamentsordning.
Rejsegodtgørelse	✓	✓	Koncerndirektionen modtager en mindre rejsegodtgørelse på lige fod med alle andre medarbejdere.
Andre ydelser	✗	✓	Koncerndirektionen modtager ikke-monetære ydelser som firmabil, telefon etc. Ind- og udstationerede koncerndirektører kan få dækket visse flytteomkostninger.
Fratrædelsesgodtgørelse	✗	✓	Op til 24 måneders fast grundløn plus pensionsbidrag. Tre ansættelseskontrakter indgået før 2008 overstiger 24-måneders-grænsen, men vil ikke overstige 36 måneders fast grundløn plus pensionsbidrag.

\* Intervallet 25–50% angiver spændet imellem 'maksimal resultatopnåelse' og 'fuld resultatopnåelse'.

\*\* Koncerndirektørerne pr. 1. marts 2015.



## RESULTATERNE I 2015 UDLØSER MAKSIMAL AKTIETILDELING

Novo Nordisk overgik målet for den finansielle værdiskabelse i 2015 med mere end de 10%, der var fastsat i incitamentsordningen. Den realiserede salgsvækst i lokale valutaer var 8,4% og overgik således også målet i incitamentsordningen, og grænsen for opfyldelse af ikke-finansielle mål blev nået. Tilsammen betyder dette, at deltagerne i det aktiebaserede langsigtede incitamentsprogram får maksimal aktietildeling.

## AFLØNNING AF KONCERN DIREKTIONEN OG ØVRIGE DIREKTØRER

Mio. kr.	2015						2014					
	Fast grund-løn <sup>5</sup>	Kontant-baseret incitament	Pension	Andre ydelser	Akti-baseret incitament <sup>6</sup>	I alt	Fast grund-løn <sup>5</sup>	Kontant-baseret incitament	Pension	Andre ydelser	Akti-baseret incitament <sup>6</sup>	I alt
<b>Koncerndirektion</b>												
Lars Rebién Sørensen	10,6	10,6	5,3	0,3	–	26,8	10,4	9,5	5,0	0,3	–	25,2
Jesper Brandgaard	6,0	4,0	2,5	0,3	–	12,8	5,8	3,9	2,5	0,3	–	12,5
Lars Fruergaard Jørgensen	5,2	3,5	2,2	0,3	–	11,2	4,4	2,2	1,6	0,3	–	8,5
Jakob Riis	5,2	2,8	2,0	0,3	–	10,3	4,4	1,8	1,5	0,3	–	8,0
Mads Krogsgaard Thomsen	6,0	4,0	2,5	0,3	–	12,8	5,8	3,9	2,5	0,3	–	12,5
Ikke-registrerede medlemmer af koncerndirektionen <sup>1, 2</sup>	13,8	12,0	6,2	0,8	–	32,8	–	–	–	–	–	–
Fratrådte medlemmer af koncerndirektionen												
Kåre Schultz <sup>3</sup>	2,5	1,3	1,0	0,1	–	4,9	7,3	4,3	3,1	0,3	–	15,0
Lise Kingo <sup>3</sup>	–	–	–	–	–	–	4,8	2,0	1,7	0,3	–	8,8
Aktiebaseret incitament	–	–	–	–	44,0	44,0	–	–	–	–	27,3	27,3
<b>Koncerndirektionen i alt</b>	<b>49,3<sup>5</sup></b>	<b>38,2</b>	<b>21,7</b>	<b>2,4</b>	<b>44,0</b>	<b>155,6</b>	<b>42,9<sup>5</sup></b>	<b>27,6</b>	<b>17,9</b>	<b>2,1</b>	<b>27,3</b>	<b>117,8</b>
<b>Øvrige direktører i alt<sup>4</sup></b>	<b>73,1<sup>5</sup></b>	<b>20,6</b>	<b>22,2</b>	<b>18,3</b>	<b>47,8</b>	<b>172,0</b>	<b>80,6<sup>5</sup></b>	<b>28,7</b>	<b>21,9</b>	<b>21,6</b>	<b>38,9</b>	<b>191,7</b>

**1** Med virkning fra 30. april 2015 blev Novo Nordisks koncerndirektion udvidet med fire nye medlemmer: Maziar Mike Doustdar, Jerzy Gruhn, Jesper Høiland og Henrik Wulff, hvoraf ingen er registreret hos Erhvervsstyrelsen som medlemmer af koncerndirektionen for Novo Nordisk A/S. De respektive beløb i tabellen indeholder afbønning fra maj til december 2015, på nær kontantbaseret incitament, som vedrører hele 2015. **2** Beløbene i tabellen indeholder skatter betalt af Novo Nordisk som følge af medlemmernes internationale ansættelsesvilkår. Derudover har Maziar Mike Doustdar, Jerzy Gruhn og Jesper Høiland for 2015 modtaget andre ydelser i overensstemmelse med Novo Nordisks internationale ansættelsesvilkår, såsom bolig, skolepenge, international sygesikring og øvrige forsikringer, ægtefællebidrag og hjælp til udarbejdelse af selvangivelse, alle betalt efter skat til de pågældende. Inklusive de af Novo Nordisk betalte skatter udgør andre ydelser modtaget i 2015 5,4 mio. kr., som ikke er medtaget i ovenstående tabel. **3** Grundet en ændring i fordelingen af ansvarsområder mellem medlemmer af koncerndirektionen forlod viceadministrerende direktør Kåre Schultz Novo Nordisk i april 2015. Kåre Schultz' aflønning indtil april 2015 er inkluderet i ovenstående tabel, hertil kommer en fratrædelsesgodtgørelse, inklusive aktiebaseret incitamentsprogram for 2015 og en del af 2016, på 72,7 mio. kr., som ikke er inkluderet. Lise Kingos aflønning for 2014 er også inkluderet i ovenstående tabel; hertil kommer en fratrædelsesgodtgørelse, inklusive aktiebaseret incitamentsprogram for 2015, på 32,2 mio. kr., som ikke er inkluderet. **4** Den samlede aflønning for 2015 omfatter aflønning til 34 direktører (31 i 2014), hvoraf tre er gået på pension eller har forladt virksomheden (ingen i 2014). Aflønningen af de fratrådte direktører er inkluderet i ovenstående tabel; hertil kommer en fratrædelsesgodtgørelse på 26 mio. kr., som ikke er inkluderet. **5** Herudover har Novo Nordisk betalt sociale bidrag for koncerndirektionen svarende til 1,3 mio. kr. (0,0 mio. kr. i 2014) og 1,4 mio. kr. (2,7 mio. kr. i 2014) for øvrige direktører. **6** Aktierne i den fælles pulje vil være bundet i et år, før de bliver overført til de deltagere, der er ansat ved udgangen af trærspejod. Værdien er kontantbeløbet af aktiebonussen tildelt i året beregnet ved brug af markedsværdien af Novo Nordisks B-aktier på tildelingstidspunktet. I bindingsperioden kan den fælles pulje potentielt blive reduceret på grund af en værdiskabelse i efterfølgende år, der er mindre end planlagt. Fordelingen mellem koncerndirektionen og øvrige direktører er baseret på fordelingen af deltagere på tildelingstidspunktet.

## LEDELSENS LANGSIGTEDE INCITAMENTSORDNING

Aktier allokeret til den fælles pulje for 2012 (487.730 aktier) blev frigivet til de enkelte deltagere efter bestyrelsens godkendelse af årsrapporten for 2015 og efter offentliggørelsen den 3. februar 2016 af årsregnskabsmeddelelsen for 2015. Baseret på aktiekursen ved udgangen af 2015 opgøres værdien af de frigivne aktier som følger:

Værdi pr. 31. december 2015 af aktier frigivet 3. februar 2016	Antal aktier	Markedsværdi <sup>1</sup> (mio. kr.)
<b>Koncerndirektion</b>		
Lars Rebién Sørensen	41.110	16,4
Jesper Brandgaard	27.335	10,9
Lars Fruergaard Jørgensen	13.665	5,5
Jakob Riis	13.665	5,5
Mads Krogsgaard Thomsen	27.335	10,9
Ikke-registrerede medlemmer af koncerndirektionen <sup>2</sup>	40.995	16,4
<b>Koncerndirektionen i alt<sup>3</sup></b>	<b>164.105</b>	<b>65,6</b>
<b>Øvrige direktører i alt<sup>3</sup></b>	<b>176.530</b>	<b>70,6</b>

**1** Markedsværdien af aktier frigivet i februar 2016 er baseret på aktiekursen for Novo Nordisks B-aktie ved udgangen af 2015 på 399,90 kr. **2** Inkluderer medlemmer af koncerndirektionen, som ikke er registreret hos Erhvervsstyrelsen. Derudover blev 4.000 aktier frigivet til et ikke-registreret medlem af koncerndirektionen, som ikke var en del af den fælles pulje for 2012 for koncerndirektionen og øvrige direktører. **3** Derudover blev 147.095 aktier (markedsværdi: 58,8 mio. kr.) frigivet til fratrådte koncerndirektører og øvrige direktører.

Lars Rebién Sørensen er bestyrelsesmedlem i Bertelsmann AG og modtog herfor et vederlag på 31.897 euro indtil maj 2015 (117.000 euro i 2014), bestyrelsesmedlem i Thermo Fisher Scientific Inc mod et vederlag på 223.865 USD indtil maj 2015 (299.063 USD i 2014) og bestyrelsesmedlem i Carlsberg A/S mod et vederlag på 838.306 kr. for 2015. Jesper Brandgaard er formand for bestyrelsen i SimCorp A/S mod et vederlag på 730.488 kr. i 2015, inklusive aktiebaseret vederlag for 1. kvartal 2015 (913.500 kr. i 2014, inklusive aktiebaseret vederlag for hele året) og formand for bestyrelsen i NNIT A/S mod et vederlag på 562.500 kr. fra og med marts 2015 som følge af børsintroduktionen af NNIT A/S (0 kr. i 2014). Vederlaget fra NNIT A/S er en del af aflønningen for koncerndirektionen i ovenstående tabel. Mads Krogsgaard Thomsen er medlem af bestyrelsen for Københavns Universitet mod et vederlag på 81.606 kr. i 2015 (81.200 kr. i 2014). Jakob Riis er medlem af bestyrelsen for ALK-Abelló A/S mod et vederlag på 415.000 kr. i 2015 (375.000 kr. i 2014). Henrik Wulff er medlem af bestyrelsen for AMBU A/S fra december 2015, med modtog ikke vederlag i 2015.



# BESTYRELSEN

**GÖRAN  
ANDO**



Tidligere administrerende direktør for Celltech Group plc, Storbritannien (pensioneret). Medlem af bestyrelsen for Novo Nordisk A/S siden 2005, næstformand siden 2006, formand siden 2013, formand for nomineringsudvalget siden 2013 og formand for vederlagsudvalget siden 2015.

**Ledelseshverv:** Symphogen A/S, Danmark (formand), bestyrelsesmedlem i Novo A/S, Danmark, Molecular Partners AG, Schweiz, EUSA Pharma Ltd., Storbritannien, og ICMEC, USA. Chefrådgiver for Essex Woodlands Health Ventures Ltd., Storbritannien.

**Særlige kompetencer:** Medicinske kompetencer samt omfattende ledelseserfaring fra den internationale lægemiddelindustri.

**Uddannelse:** Speciallæge i almen medicin (1978) og medicinsk embedseksamen (1973), begge fra Linköpings Universitet, Sverige.

**JEPPE  
CHRISTIANSEN**



Administrerende direktør i Fondsmæglerselskabet M&A Invest A/S, Danmark. Medlem af og næstformand for bestyrelsen for Novo Nordisk A/S siden 2013. Medlem af vederlagsudvalget og revisionsudvalget siden 2015.

**Ledelseshverv:** Haldor Topsøe A/S (næstformand), bestyrelsesmedlem i Novo A/S, KIRKBI A/S og Symphogen A/S, alle i Danmark.

**Særlige kompetencer:** Omfattende baggrund og erfaring fra finanssektoren, navnlig vedrørende finans- og kapitalmarkedsforhold, samt indsigt i investorperspektivet.

**Uddannelse:** Cand.polit. (1985) fra Københavns Universitet, Danmark.

**BRUNO  
ANGELICI**



Tidligere koncerndirektør i AstraZeneca (pensioneret). Medlem af bestyrelsen for Novo Nordisk A/S siden 2011 og medlem af nomineringsudvalget siden 2013.

**Ledelseshverv:** Vectura Group plc (formand), bestyrelsesmedlem i Smiths Group plc, Storbritannien, og Wolters Kluwer, Holland. Medlem af Global Advisory Board i Takeda Pharmaceutical Company Limited, Japan.

**Særlige kompetencer:** Omfattende global erfaring fra to virksomheder indenfor lægemidler og medicinsk udstyr samt indgående viden om strategi, salg, marketing og selskabsledelse i større virksomheder.

**Uddannelse:** AMP (1993) fra Harvard Business School og MBA (1978) fra Kellogg School of Management, Northwestern University, begge i USA.

**SYLVIE  
GRÉGOIRE**



Tidligere direktør i Human Genetic Therapies, Shire plc, USA og Schweiz (pensioneret). Medlem af bestyrelsen for Novo Nordisk A/S og medlem af revisionsudvalget siden 2015.

**Ledelseshverv:** Bestyrelsesmedlem i Galenica AG, Schweiz, og Perkin Elmer Inc., USA. Formand for det strategiske udvalg i Tarix Orphan LLC, USA. Rådgiver for finans- og bioteksektoren.

**Særlige kompetencer:** Omfattende viden om regulatoriske forhold i USA og EU, hvor hun har erfaring fra alle faser af et produkts livscyklus fra opdagelse, registrering og prælancering til livscyklusstyring, når produktet er på markedet. Derudover har hun viden om finansielle forhold, herunder forretningsmæssigt driftsansvar.

**Uddannelse:** Doktor i farmaci (1986) fra State University of NY, Buffalo, USA, BA i farmaci (1984) fra Laval University, Canada, og Science College degree (1980) fra Séminaire de Sherbrooke, Canada.

**LIZ  
HEWITT**



Tidligere koncerndirektør for Corporate Affairs i Smith & Nephew plc, Storbritannien (pensioneret). Medlem af bestyrelsen for Novo Nordisk A/S siden 2012, formand for revisionsudvalget siden 2015 (medlem siden 2012) og medlem af nomineringsudvalget siden 2013.

**Ledelseshverv:** Medlem af bestyrelsen og formand for revisionsudvalget i Savills plc samt medlem af bestyrelsen og formand for nomineringsudvalget i Melrose Industries plc, begge i Storbritannien. Ekstremt senior-medlem af revisionsudvalget i det britiske overhus.

**Særlige kompetencer:** Omfattende erfaring indenfor medicinsk udstyr, betydelig viden om finansielle forhold og indsigt i, hvordan store internationale virksomheder arbejder.

**Uddannelse:** BSc (Econ) (Hons) (1977) fra University College London og autoriseret revisor (FCA), UK Institute of Chartered Accountants (1982), begge i Storbritannien.

**LISELOTTE  
HYVELED**



Projektschef for Novo Nordisks udviklingsprojekter indenfor måltidsinsulin: hurtigerevirkende insulin aspart og leverpræferentielt måltidsinsulin. Organisatorisk placeret i Global Development. Medlem af bestyrelsen for Novo Nordisk A/S siden 2014 og medlem af nomineringsudvalget siden 2015.

**Uddannelse:** Cand.pharm. (1992) fra Københavns Universitet og Master of Medical Business Strategies (2011) fra Copenhagen Business School, begge i Danmark.

Navn (mand/kvinde)	Indtrådt	Periode	Nationalitet	Født	Uafhængighed <sup>1</sup>
Göran Ando (m)	2005	2016	Svensk	Marts 1949	Ikke uafhængig <sup>2</sup>
Jeppe Christiansen (m)	2013	2016	Dansk	November 1959	Ikke uafhængig <sup>2,4</sup>
Bruno Angelici (m)	2011	2016	Fransk	April 1947	Uafhængig
Sylvie Grégoire (k)	2015	2016	Canadisk/Amerikansk	November 1961	Uafhængig <sup>1,5</sup>
Liz Hewitt (k)	2012	2016	Britisk	November 1956	Uafhængig <sup>1,5</sup>
Liselotte Hyveled (k)	2014	2018	Dansk	Januar 1966	Ikke uafhængig <sup>3</sup>

1. Jf. afsnit 3.2.1 i Anbefalinger for god selskabsledelse (opdateret 2014) fastlagt af Nasdaq Copenhagen. 2. Medlem af direktionen eller bestyrelsen i Novo A/S. 3. Valgt af Novo Nordisks medarbejdere.



**THOMAS  
PAUL  
KOESTLER**

Medlem af koncerndirektionen i Vatera Holdings LLC, USA. Medlem af bestyrelsen for Novo Nordisk A/S siden 2011 og medlem af vederlagsudvalget siden 2015.

**Ledelseshverv:** Melinta Therapeutics Inc., USA (formand). Bestyrelsesmedlem i Momenta Pharmaceuticals Inc., ImmusanT Inc., Arisaph Pharmaceuticals Inc. og Edgemont Pharmaceuticals LLC, alle i USA.

**Særlige kompetencer:** Omfattende viden indenfor forskning og udvikling såvel generelt som indenfor det regulatoriske område. Betydelig viden om lægemiddelindustrien generelt og om, hvordan store internationale virksomheder arbejder. Endvidere viden om det amerikanske marked.

**Uddannelse:** Ph.d. i medicin og patologi (1982) fra Roswell Park Memorial Institute og BSc i biologi (1975) fra Daemen College, begge i USA.

**EIVIND  
KOLDING**

Administrerende direktør for Novo A/S, Danmark. Medlem af bestyrelsen for Novo Nordisk A/S og observatør i revisionsudvalget siden 2015.

**Ledelseshverv:** Bestyrelsesmedlem i NNIT A/S og Sonion Group, begge i Danmark.

**Særlige kompetencer:** Omfattende ledelseserfaring fra store multinationale selskaber med hovedkontor i Danmark indenfor regulerede markeder samt betydelig viden om finansielle forhold.

**Uddannelse:** AMP (1994) fra Wharton Business School, USA, og cand.jur. (1983), Københavns Universitet, Danmark.

**ANNE MARIE  
KVERNELAND**

Laborant og fuldtidstillidsrepræsentant. Medlem af bestyrelsen for Novo Nordisk A/S siden 2000.

**Ledelseshverv:** Bestyrelsesmedlem i Novo Nordisk Fonden siden 2014.

**Uddannelse:** Bioanalytiker (1980) fra Rigshospitalet, Danmark.

**SØREN  
THUESEN  
PEDERSEN**

External Affairs director i Quality Intelligence. Medlem af bestyrelsen for Novo Nordisk A/S siden 2006 og medlem af vederlagsudvalget siden 2015.

**Ledelseshverv:** Bestyrelsesmedlem i HOFOR A/S, HOFOR Forsyning Holding PS, HOFOR Forsyning Komplementar A/S og HOFOR Forsyning A/S (Hovedstadsområdets Forsyningselskab), alle i Danmark.

**Uddannelse:** Kemiingeniør (1988) fra Danmarks Ingeniørakademi.

**STIG  
STRØBÆK**

Elektriker og fuldtidstillidsrepræsentant. Medlem af bestyrelsen for Novo Nordisk A/S siden 1998 og medlem af revisionsudvalget siden 2013.

**Uddannelse:** Elektriker. Diplom i videreuddannelse for bestyrelsesmedlemmer (2003) fra Lønmodtagernes Dyrtidsfond (LD).

**MARY  
SZELA**

Administrerende direktør for Aegerion Pharmaceuticals, Inc., USA. Medlem af bestyrelsen for Novo Nordisk A/S, vederlagsudvalget og nomineringsudvalget siden 2015. Bestyrelsesmedlem i Cohrus Biosciences, Inc., Receptos Pharmaceuticals, Inc., Suneva Medical, Inc. og Aegerion Pharmaceuticals, Inc., alle i USA.

**Ledelseshverv:** Bestyrelsesmedlem i Cohrus Biosciences, Inc., Receptos Pharmaceuticals, Inc. og Suneva Medical, Inc., alle i USA.

**Særlige kompetencer:** Stor indsigt i kliniske, regulatoriske og markedsføringsmæssige aspekter samt operationel og strategisk erfaring fra lægemiddelindustrien i Nordamerika.

**Uddannelse:** MBA (1991) fra University of Illinois, Chicago, og BSc i sygepleje (1985) fra University of Illinois, Chicago, USA.

Navn (mand/kvinde)	Indtrådt	Periode	Nationalitet	Født	Uafhængighed <sup>1</sup>
Thomas Paul Koestler (m)	2011	2016	Amerikansk	Juni 1951	Uafhængig
Eivind Kolding (m)	2015	2016	Dansk	November 1959	Ikke uafhængig <sup>2</sup>
Anne Marie Kverneland (k)	2000	2018	Dansk	Juli 1956	Ikke uafhængig <sup>3</sup>
Søren Thuesen Pedersen (m)	2006	2018	Dansk	December 1964	Ikke uafhængig <sup>3</sup>
Stig Strøbæk (m)	1998	2018	Dansk	Januar 1964	Ikke uafhængig <sup>1,4</sup>
Mary Szela (k)	2015	2016	Amerikansk	Maj 1963	Uafhængig

4. I henhold til den amerikanske lov om udstedelse af værdipapirer, US Securities Exchange Act, anses Liz Hewitt og Sylvie Grégoire for uafhængige medlemmer af revisionsudvalget, mens Jeppe Christiansen og Stig Strøbæk er omfattet af en undtagelse fra uafhængighedskravene. 5. Liz Hewitt og Sylvie Grégoire anses for uafhængige medlemmer af revisionsudvalget som defineret i kapitel 8 i Lov om godkendte revisorer og revisionsvirksomheder.



# KONCERNDIREKTIONEN



**LARS  
REBIEN  
SØRENSEN**

Administrerende  
direktør

Lars Rebie Sørensen blev ansat i Novo Nordisks Enzymes Marketing i 1982. Han blev udnævnt til administrerende direktør i november 2000.

**Andre ledelseshverv:** Næstformand for bestyrelsen i Carlsberg A/S, Danmark.

**Født:** Oktober 1954.



**JESPER  
BRANDGAARD**

Koncerndirektør,  
Finance, Legal &  
Investor Relations

Jesper Brandgaard blev ansat i Novo Nordisk i 1999 som direktør for Corporate Finance. Han blev udnævnt til koncernøkonomidirektør i november 2000.

**Andre ledelseshverv:** Bestyrelsesformand for SimCorp A/S og NNIT A/S, begge i Danmark.

**Født:** Oktober 1963.



**MAZIAR  
MIKE  
DOUSTDAR\***

Koncerndirektør,  
International  
Operations

Maziar Mike Doustdar blev ansat i Novo Nordisk i 1992 som kontorassistent i Wien, Østrig. Han blev udnævnt til direktør med ansvar for International Operations i 2013, og i april 2015 blev han udnævnt til koncerndirektør med ansvar for International Operations.

**Født:** August 1970.



**JERZY  
GRUHN\***

Koncerndirektør,  
Europe

Jerzy Gruhn blev ansat i Novo Nordisk i 1996 som national salgschef i Polen. Han blev udnævnt til direktør med ansvar for Europa i 2013, og i april 2015 blev han udnævnt til koncerndirektør med ansvar for Europa.

**Født:** Juni 1963.



**JESPER  
HØILAND\***

Koncerndirektør,  
US

Jesper Høiland blev ansat i Novo Nordisk i 1987 som assisterende områdechef for USA, Canada, Australien og New Zealand. Han blev udnævnt til direktør med ansvar for Nordamerika i 2013, og i april 2015 blev han udnævnt til koncerndirektør med ansvar for USA.

**Født:** September 1960.



**LARS  
FRUERGAARD  
JØRGENSEN**

Koncerndirektør,  
Corporate Development

Lars Fruergaard Jørgensen blev ansat i Novo Nordisk i 1991 som økonom. Han blev udnævnt til koncerndirektør med ansvar for IT, Quality & Corporate Development i januar 2013, og i november 2014 overtog han ansvaret for Corporate People & Organisation og Business Assurance.

**Andre ledelseshverv:** Formand for bestyrelsen for NNE Pharmaplan A/S, Danmark.

**Født:** November 1966.



**JAKOB RIIS\***

Koncerndirektør, China,  
Pacific & Marketing

Jakob Riis blev ansat i Novo Nordisk i 1996 som sundhedsøkonom i marketingområdet. Han blev udnævnt til direktør for Marketing i 2005, og i januar 2013 blev han udnævnt til koncerndirektør og overtog i 2015 salgsansvar for regionerne Kina og Pacific.

**Andre ledelseshverv:** Formand for bestyrelsen for Copenhagen Institute of Interaction Design og medlem af bestyrelsen samt revisionsudvalgsformand for ALK-Abelló A/S, begge i Danmark.

**Født:** April 1966.



**MADS  
KROGSGAARD  
THOMSEN**

Koncerndirektør,  
Research &  
Development

Mads Krogsgaard Thomsen blev ansat i Novo Nordisk i 1991 som leder af virksomhedens væksthormonforskning. Han blev udnævnt til direktør for diabetesforskningen i 1994 og til koncerndirektør med ansvar for forskning og udvikling i november 2000.

**Andre ledelseshverv:** Formand for bestyrelsen for Steno Diabetes Center A/S og næstformand for bestyrelsen for Københavns Universitet, begge i Danmark.

**Født:** December 1960.



**HENRIK  
WULFF\***

Koncerndirektør,  
Product Supply

Henrik Wulff blev ansat i Novo Nordisk i 1998 som kemiker. Han blev udnævnt til direktør for Product Supply i 2013, og i april 2015 blev han udnævnt til koncerndirektør med ansvar for Product Supply.

**Andre ledelseshverv:** Formand for bestyrelsen i NN Pharmatech A/S og bestyrelsesmedlem i NNE Pharmaplan A/S og Ambu A/S, alle i Danmark.

**Født:** November 1970.

\* Ikke registreret i Erhvervsstyrelsen som medlemmer af koncerndirektionen i Novo Nordisk A/S.



# PRODUKTOVERSIGT



Et udvalg af Novo Nordisks injektionssystemer.

## DIABETESBEHANDLING

### NY GENERATION AF INSULINER

- Tresiba®, insulin degludec
- Ryzodeg®, insulin degludec/insulin aspart
- Xultophy®, insulin degludec/liraglutid

### GLUKAGONLIGNENDE PEPTID-1

- Victoza®, liraglutid

### MODERNE INSULINER

- Levemir®, insulin detemir
- NovoRapid®, insulin aspart
- NovoRapid® PumpCart®, insulin i præfyldt cylinderampul til pumpe
- NovoMix® 30, bifasisk insulin aspart
- NovoMix® 50, bifasisk insulin aspart
- NovoMix® 70, bifasisk insulin aspart

### HUMAN INSULIN

- Insulatard®, isophan (NPH) insulin
- Actrapid®, regulær human insulin
- Mixtard® 30, bifasisk human insulin
- Mixtard® 40, bifasisk human insulin
- Mixtard® 50, bifasisk human insulin

### INJEKTIONSSYSTEMER OG TILBEHØR

Præfyldte insulindoseringsystemer

- FlexTouch®, U100, U200
- FlexPen®
- InnoLet®

### ANDRE INSULINDOSERINGSSYSTEMER

- PumpCart®, NovoRapid® cylinderampul til brug i pumpe
- Cylinderampul
- Hætteglas

### INSULINPENNE

- NovoPen® 5
- NovoPen® 4
- NovoPen® 3
- NovoPen Echo®, med hukommelsesfunktion

### NÅLE

- NovoFine® Plus
- NovoFine®
- NovoTwist®
- NovoFine® AutoCover

### ANTIDIABETIKA I TABLETFORM

- NovoNorm®, repaglinid

### GLUKAGON

- GlucaGen®, glukagon til diagnostisk brug
- GlucaGen® Hypokit, glukagon til akut brug ved svær hypoglykæmi

## FEDME

- Saxenda®, GLP-1-analog til vægtregulering

## BIOPHARMACEUTICALS

### HÆMOSTASE

- NovoSeven®, rekombinant faktor VIIa, fås også i præfyldt injektionssprøjte i stadig flere lande
- NovoThirteen®, rekombinant faktor XIII
- NovoEight®, rekombinant faktor VIII

### HUMANT VÆKSTHORMON

- Norditropin®, somatropin (fremstillet ved hjælp af rekombinant DNA-teknologi)
- Norditropin® FlexPro®, præfyldt væksthormonpen til flerdosisbrug
- Norditropin® NordiFlex®, præfyldt væksthormonpen til flerdosisbrug
- Norditropin® NordiLet®, præfyldt væksthormonpen til flerdosisbrug
- Norditropin® SimpleXx®, flergangspensystem til flerdosisbrug
- NordiPen®
- PenMate®, automatisk nåleindfører (til NordiPen® og NordiFlex®)

### HORMONPRÆPARATER (HRT)

- Vagifem®, estradiolhemihydrat
- Activelle®, estradiol/norethisteronacetat
- Kliogest®, estradiol/norethisteronacetat
- Novofem®, estradiol/norethisteronacetat
- Trisekvens®, estradiol/norethisteronacetat
- Estrofem®, estradiol



# RESULTATOPGØRELSE

OG TOTALINDKOMSTOPGØRELSE FOR PERIODEN 1. JANUAR – 31. DECEMBER

Mio. kr.	2015	2014	2013
<b>RESULTATOPGØRELSE</b>			
Nettoomsætning	107.927	88.806	83.572
Produktionsomkostninger	16.188	14.562	14.140
Bruttoresultat	91.739	74.244	69.432
Salgs- og distributionsomkostninger	28.312	23.223	23.380
Forsknings- og udviklingsomkostninger	13.608	13.762	11.733
Administrationsomkostninger	3.857	3.537	3.508
Andre driftsindtægter (netto)	3.482	770	682
– Engangsindtægt fra delvist frasalg af NNIT A/S	2.376	–	–
Resultat af primær drift	49.444	34.492	31.493
Finansielle indtægter	85	167	1.702
Finansielle omkostninger	6.046	563	656
Resultat før skat	43.483	34.096	32.539
Selskabsskat	8.623	7.615	7.355
<b>Årets resultat</b>	<b>34.860</b>	26.481	25.184

## RESULTAT PR. AKTIE

Resultat pr. aktie (kr.)	13,56	10,10	9,40
Resultat pr. aktie, udvandet (kr.)	13,52	10,07	9,35

Mio. kr.	2015	2014	2013
<b>TOTALINDKOMSTOPGØRELSE</b>			
Årets resultat	34.860	26.481	25.184
<b>Anden totalindkomst:</b>			
Valutakursreguleringer ved omregning af dattervirksomheder	(669)	(39)	(435)
Pengestrømsikring, realisation af tidligere års udskudte (gevinster)/tab	2.216	(1.229)	(809)
Pengestrømsikring, årets udskudte gevinster/(tab)	(681)	(2.225)	1.195
Øvrige poster	366	111	75
Poster, der efterfølgende reklassificeres til Resultatopgørelsen, når specifikke betingelser er opfyldt	1.232	(3.382)	26
Ændringer af aktuarmæssige forudsætninger vedrørende pensioner	(37)	(247)	54
Poster, der ikke efterfølgende reklassificeres til Resultatopgørelsen	(37)	(247)	54
Årets anden totalindkomst før skat	1.195	(3.629)	80
Skat af anden totalindkomst, indtægter/(omkostninger)	(87)	977	(211)
<b>Årets anden totalindkomst efter skat</b>	<b>1.108</b>	(2.652)	(131)
<b>Årets totalindkomst i alt</b>	<b>35.968</b>	23.829	25.053

Se noter i det fulde koncernregnskab: Novo Nordisk Annual Report 2015 på [novonordisk.com/annualreport](http://novonordisk.com/annualreport)



# BALANCE

PR. 31. DECEMBER

Mio. kr.	2015	2014
<b>AKTIVER</b>		
Immaterielle aktiver	2.158	1.378
Materielle aktiver	25.545	23.136
Kapitalandele i associeret virksomhed	811	–
Udskudte skatteaktiver	6.806	5.399
Øvrige finansielle aktiver	1.339	856
<b>Langfristede aktiver i alt</b>	<b>36.659</b>	30.769
Varebeholdninger	12.758	11.357
Varedebitorer	15.485	13.041
Tilgodehavende selskabsskat	3.871	3.210
Andre tilgodehavender og forudbetalinger	2.257	2.750
Letomsættelige værdipapirer	3.542	1.509
Afledte finansielle instrumenter	304	30
Likvide beholdninger	16.923	14.396
<b>Kortfristede aktiver i alt</b>	<b>55.140</b>	46.293
<b>Aktiver i alt</b>	<b>91.799</b>	77.062
<b>PASSIVER</b>		
Aktiekapital	520	530
Egne aktier	(10)	(11)
Overført resultat	46.816	41.277
Andre reserver	(357)	(1.502)
<b>Egenkapital i alt</b>	<b>46.969</b>	40.294
Udskudte skatteforpligtelser	6	7
Pensionsforpligtelser	1.186	1.031
Andre hensatte forpligtelser	2.765	2.041
<b>Langfristede forpligtelser i alt</b>	<b>3.957</b>	3.079
Kortfristede gældsforpligtelser	1.073	720
Leverandørgæld	4.927	4.950
Skyldig selskabsskat	3.777	2.771
Andre forpligtelser	12.655	11.051
Afledte finansielle instrumenter	1.382	2.607
Andre hensatte forpligtelser	17.059	11.590
<b>Kortfristede forpligtelser i alt</b>	<b>40.873</b>	33.689
<b>Forpligtelser i alt</b>	<b>44.830</b>	36.768
<b>Passiver i alt</b>	<b>91.799</b>	77.062

Se noter i det fulde koncernregnskab: Novo Nordisk Annual Report 2015 på [novonordisk.com/annualreport](http://novonordisk.com/annualreport)



# PENGESTRØMSOPGØRELSE

FOR PERIODEN 1. JANUAR – 31. DECEMBER

Mio. kr.	2015	2014	2013
<b>Årets resultat</b>	<b>34.860</b>	26.481	25.184
Regulering for ikke-likvide driftsposter:			
Selskabsskat i Resultatopgørelsen	8.623	7.615	7.355
Af- og nedskrivninger	2.959	3.435	2.799
Engangsindtægt fra NNIT A/S inkluderet i "andre driftsindtægter"	(2.526)	–	–
Øvrige reguleringer for ikke-likvide driftsposter	5.908	4.163	584
Ændring i arbejdskapital	(2.157)	(2.148)	(265)
Renteindbetalinger	55	131	131
Renteudbetalinger	(61)	(78)	(39)
Betalt selskabsskat	(9.374)	(7.907)	(9.807)
<b>Pengestrømme fra driftsaktivitet</b>	<b>38.287</b>	31.692	25.942
Provenu fra delvis afståelse af NNIT A/S	2.303	–	–
Køb af immaterielle aktiver	(1.182)	(321)	(403)
Salg af materielle aktiver	15	4	31
Køb af materielle aktiver	(5.224)	(3.990)	(3.238)
Salg af øvrige finansielle aktiver	32	35	29
Køb af øvrige finansielle aktiver	(9)	(24)	(3)
Salg af letomsættelige værdipapirer	1.500	2.232	811
Køb af letomsættelige værdipapirer	(3.533)	–	–
<b>Pengestrømme fra investeringsaktivitet</b>	<b>(6.098)</b>	(2.064)	(2.773)
Køb af egne aktier, netto	(17.196)	(14.667)	(13.924)
Betalt udbytte	(12.905)	(11.866)	(9.715)
<b>Pengestrømme fra finansieringsaktivitet</b>	<b>(30.101)</b>	(26.533)	(23.639)
<b>Nettopengestrømme fra aktiviteter</b>	<b>2.088</b>	3.095	(470)
Likvider ved årets begyndelse	13.676	10.513	11.053
Gevinst/(tab) på valuta, der indgår i likvider	86	68	(70)
<b>Likvider ved årets slutning</b>	<b>15.850</b>	13.676	10.513

Se noter i det fulde koncernregnskab: Novo Nordisk Annual Report 2015 på [novonordisk.com/annualreport](http://novonordisk.com/annualreport)



# EGENKAPITALOPGØRELSE

PR. 31. DECEMBER

Mio. kr.	Aktie- kapital	Egne aktier	Overført resultat	Andre reserver			Andre reserver i alt	I alt
				Valuta- kursregu- leringer	Sikring af penge- strømme	Skat og øvrige poster		
2015								
Ved årets begyndelse	530	(11)	41.277	(248)	(2.221)	967	(1.502)	40.294
Årets resultat			34.860					34.860
Årets anden totalindkomst			(37)	(669)	1.535	279	1.145	1.108
Årets totalindkomst i alt			34.823	(669)	1.535	279	1.145	35.968
Transaktioner med ejerne:								
Udloddet udbytte			(12.905)					(12.905)
Aktiebaseret aflønning			442					442
Skattefradrag relateret til betingede aktier			366					366
Køb af egne aktier		(10)	(17.219)					(17.229)
Salg af egne aktier		1	32					33
Nedsættelse af B-aktiekapital	(10)	10						–
Ved årets slutning	520	(10)	46.816	(917)	(686)	1.246	(357)	46.969
2014								
Ved årets begyndelse	550	(21)	41.137	(209)	1.233	(121)	903	42.569
Årets resultat			26.481					26.481
Årets anden totalindkomst			(247)	(39)	(3.454)	1.088	(2.405)	(2.652)
Årets totalindkomst i alt			26.234	(39)	(3.454)	1.088	(2.405)	23.829
Transaktioner med ejerne:								
Udloddet udbytte			(11.866)					(11.866)
Aktiebaseret aflønning			371					371
Skattefradrag relateret til betingede aktier			58					58
Køb af egne aktier		(11)	(14.717)					(14.728)
Salg af egne aktier		1	60					61
Nedsættelse af B-aktiekapital	(20)	20						–
Ved årets slutning	530	(11)	41.277	(248)	(2.221)	967	(1.502)	40.294
2013								
Ved årets begyndelse	560	(17)	39.001	226	847	15	1.088	40.632
Årets resultat			25.184					25.184
Årets anden totalindkomst			54	(435)	386	(136)	(185)	(131)
Årets totalindkomst i alt			25.238	(435)	386	(136)	(185)	25.053
Transaktioner med ejerne:								
Udloddet udbytte			(9.715)					(9.715)
Aktiebaseret aflønning			409					409
Skattefradrag relateret til betingede aktier			114					114
Køb af egne aktier		(15)	(13.974)					(13.989)
Salg af egne aktier		1	64					65
Nedsættelse af B-aktiekapital	(10)	10						–
Ved årets slutning	550	(21)	41.137	(209)	1.233	(121)	903	42.569

Se noter i det fulde koncernregnskab: Novo Nordisk Annual Report 2015 på [novonordisk.com/annualreport](http://novonordisk.com/annualreport)



# SOCIALT KONCERNREGNSKAB

PR. 31. DECEMBER

	2015	2014	2013
<b>PATIENTER</b>			
Diabetikere, som anvender Novo Nordisks produkter (estimat i mio.)	26,8	24,4	24,3
Mindst udviklede lande, som har købt insulin i henhold til den differentierede prispolitik	23	32	35
Donationer (mio. kr.)	97	84	83
Indkøbte dyr til forskning	67.240	64.533	72.662
Nye patentfamilier (prioritetsskabende ansøgninger)	77	93	77
<b>MEDARBEJDERE</b>			
Medarbejdere	41.122 <sup>1</sup>	41.450	38.436
Medarbejderomsætning	9,2%	9,0%	8,1%
Efterlevelse af Novo Nordisk Way (skala 1–5)	4,3	4,3	4,4
Kønsfordeling blandt ledere (mænd/kvinder)	59%/41%	60%/40%	61%/39%
Frekvens af arbejdsulykker (antal/million arbejdstimer)	3,0	3,2	3,5
<b>INTERNE KONTROLLER OG MONITORERING</b>			
Relevante medarbejdere undervist i forretningsetik	98%	98%	97%
Auditeringer af forretningsetik	49	42	45
Opfyldelse af handlingspunkter efter facilitatorernes gennemgang af Novo Nordisk Way	94%	95%	96%
Leverandørauditeringer	240	224	221
Tilbagekaldelser af produkter	2	2	6
Ikke-godkendte inspektioner	0	0	0
Virksomhedens omdømme (skala 0–100)	82,4	80,8	82,9 <sup>2</sup>

1. Fraregnet medarbejdere i NNIT A/S, som blev frasolgt i 2015.

2. Tal for diabetikere og medarbejdere er ikke medtaget, da de ikke er tilgængelige.

# MILJØMÆSSIGT KONCERNREGNSKAB

PR. 31. DECEMBER

	2015	2014	2013
<b>RESSOURCER</b>			
Energiforbrug (1.000 GJ)	2.778	2.556	2.572
Vandforbrug (1.000 m <sup>3</sup> )	3.131	2.959	2.685
<b>EMISSIONER, ORGANISKE RESTPRODUKTER OG AFFALD</b>			
CO <sub>2</sub> -emissioner fra energiforbrug (1.000 tons)	107	120	125
CO <sub>2</sub> -emissioner fra transport (1.000 tons)	43	57	59
Organiske restprodukter (tons)	124.049	110.095	110.228
Affald (tons)	34.715	30.720	20.387
Ikke-farligt affald (andel)	42%	50%	63%
Vilkårsoverskridelser af grænseværdier	28	9	14

Se noter i det fulde koncernregnskab: Novo Nordisk Annual Report 2015 på [novonordisk.com/annualreport](http://novonordisk.com/annualreport)



# MERE INFORMATION OG REFERENCER

## FINANSIEL KALENDER 2016

UDBYTTE					UDSENDELSE AF REGNSKABSMEDDELELSER			
<b>18</b> MARTS 2016	<b>21</b> MARTS 2016	<b>22</b> MARTS 2016	<b>23</b> MARTS 2016	<b>30</b> MARTS 2016	<b>29</b> APRIL 2016	<b>05</b> AUGUST 2016	<b>28</b> OKTOBER 2016	<b>02</b> FEBRUAR 2017
Ordinær general- forsamling	Ex-udbytte	Skæringsdato	Udbetaling, B-aktier	Udbetaling, ADR'er	Første tre måneder	Halvår	Første ni måneder	Hele året

## NYHEDER OG OPDATERINGER

### LÆS FLERE NYHEDER FRA NOVO NORDISK PÅ

[novonordisk.com/investors](http://novonordisk.com/investors)  
[novonordisk.com/press](http://novonordisk.com/press)  
[novonordisk.com/sustainability](http://novonordisk.com/sustainability)

### FØLG NOVO NORDISK PÅ DE SOCIALE MEDIER



[facebook.com/novonordisk](https://facebook.com/novonordisk)



[twitter.com/novonordisk](https://twitter.com/novonordisk)



[linkedin.com/company/novo-nordisk](https://linkedin.com/company/novo-nordisk)



[pinterest.com/novonordisk](https://pinterest.com/novonordisk)



[youtube.com/novonordisk](https://youtube.com/novonordisk)

## RAPPORTERING

### ÅRSRAPPORT

Årsrapporten findes kun i en engelsk udgave, Novo Nordisk Annual Report 2015. Supplerende oplysninger gives i særskilte rapporter for at opfylde specifikke juridiske krav og informere særlige interessentgrupper. Disse rapporter kan downloades fra [novonordisk.com/annualreport](http://novonordisk.com/annualreport).

### FORM 20-F

Krav fra det amerikanske børstilsyn, US Securities and Exchange Commission (SEC), til udenlandske private udstedere med aktier noteret på amerikanske børser om årlig rapportering i et standardiseret rapporteringsformat (Form 20-F), for at investorerne kan evaluere virksomheden i forhold til amerikanske aktier.

### REDEGØRELSE FOR SELSKABSLEDELSE

Lovpligtig i henhold til årsregnskabsloven. Rapportering om virksomhedens efterlevelse af de danske anbefalinger for god selskabsledelse.

### FN'S GLOBAL COMPACT

Frivillig rapportering (Communication on Progress) til FN's Global Compact om fremskridt i forhold til de 10 principper om menneskerettigheder, arbejdstagerrettigheder, miljø og antikorrupition. Som LEAD-medlem rapporterer Novo Nordisk yderligere om fremskridt i forhold til sit bæredygtighedsengagement og FN's mål. Denne rapportering opfylder endvidere årsregnskabslovens §§ 99a og 99b om politikker og handlingsplaner for samfundsansvar samt fremskridt i forhold til mål for mangfoldighed i ledelsen.

**Design og produktion:** ADTomic Communications. **Regnskab og noter:** Team2Graphics. **Tryk:** Bording PRO as, februar 2016. **Foto:** Rasmus Daniel Taun, Jesper Westley Jørgensen, Ulrik Jantzen, Ludmilla Aud Timsdottir, Martin Juul, Anders Bøggild, Jesper Edvardsen, Søren Svendsen, Jens Lindhe.

**Referencer:** 1. International Diabetes Federation. *IDF Diabetes Atlas, 7th edn*. Brussels, Belgium: International Diabetes Federation 2015. 2. World Health Organization: Obesity and overweight. Fact sheet N° 311. World Health Organization, januar 2015. 3. World Federation of Hemophilia. About Bleeding Disorders, Hemophilia. World Federation of Hemophilia, maj 2012. 4. Efpia, European Federation of Pharmaceutical Industries and Associations. <http://www.efpia.eu/diseases/68/59/Growth-Problems> 5. EvaluatePharma, januar 2016. Interne data på fil. 6. UK Prospective Diabetes Study (UKPDS) Group. UK prospective diabetes study VIII. Study design, progress and performance. *Diabetologia* 1991; 34:877–890. 7. Hart JT. Rule of Halves: implications of increasing diagnosis and reducing dropout for future workload and prescribing costs in primary care. *Br J Gen Pract* 1992; 42(356):116–119 og Smith WCS, Lee AJ, Crombie IK & Tunstall-Pedoe H. Control of blood pressure in Scotland: the rule of halves. *BMJ* 1990; 300:981–983. 8. International Diabetes Federation, [idf.org/about-diabetes/risk-factors](http://idf.org/about-diabetes/risk-factors) 9. Gray A, et al: Cost effectiveness of an intensive blood glucose control policy in patients with type 2 diabetes: economic analysis alongside randomised controlled trial (UKPDS 41). *BMJ* 2000; 320:1373–8. 10. Li R, et al: Cost-effectiveness of interventions to prevent and control diabetes mellitus: a systematic review. *Diabetes Care* 2010; 33:1872–94. 11. Gray A, Raikou M, McGuire A, et al. Cost-effectiveness of an intensive blood glucose control policy in patients with type 2 diabetes: economic analysis alongside randomised controlled trial (UKPDS 41). *BMJ* 2000; 320:1373–8. 12. Novo Nordisk A/S. Economic simulations based on the CORE diabetes model 2011. 13. American Diabetes Association. Approaches to Glycemic Treatment. *Diabetes Care* 2015; 38(Supplement 1):S41–S48. 14. McCullough AJ. Epidemiology of the metabolic syndrome in the USA. *Journal of Digestive Diseases* 2011; 12:333–340. 15. Ogden CL, Carroll MD, Kit BK & Flegal KM. Prevalence of Childhood and Adult Obesity in the United States 2011–2012. *The Journal of the American Medical Association* 2014; 311(8):806–814. 16. United Nations Department of Economic and Social Affairs. *World Urbanization Prospects, The 2014 Revision, Highlights* 2014. 17. Stonebraker JS, Bolton-Maggs PHB, Soucie JM, Walker I & Brooker M. A study of variations in the reported haemophilia A prevalence around the world. *Haemophilia* 2010; 16:20–32. 18. Stonebraker JS, Bolton-Maggs PHB, Michael Soucie JM, Walker I & Brooker M. A study of variations in the reported haemophilia B prevalence around the world. *Haemophilia* 2012; 18(3):e91–4.

Markedsdata på s. 16, 17, 36 og 37 er fra IMS Health 2015. Markedsdata på s. 35 er fra IMS Health – Market Prognosis Global, 20. januar 2016 (liste over inkluderede lande i regioner findes på intern data fil).



### Besøgsadresse

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Tlf. +45 4444 8888  
CVR-nr. 24 25 67 90  
[novonordisk.com](http://novonordisk.com)

### Investorservice

Forespørgsler og feedback til  
årsskriftet bedes stilet til:  
[annualreport@novonordisk.com](mailto:annualreport@novonordisk.com)

Aktionærer med forespørgsler  
vedrørende udbyttebetaling og  
aktionærkonti bedes rette henvendelse til:  
[shareholder@novonordisk.com](mailto:shareholder@novonordisk.com)

Luftfoto af Shanghai, Kina. Der bor over 23 mio. mennesker i  
Shanghai, som er en af de byer, der har tilsluttet sig  
partnerskabsprogrammet Cities Changing Diabetes. Det  
anslås, at 8,3% af byens indbyggere har type 2-diabetes. Det  
tal vil i 2040 være steget til 15,5%, hvis der ikke gøres noget.  
Læs mere om Cities Changing Diabetes på [side 30](#).



MIX  
Papir fra  
ansvarlige kilder  
FSC® C022933



**OBESITY** How do you market a treatment for a disease that many doctors don't even acknowledge?

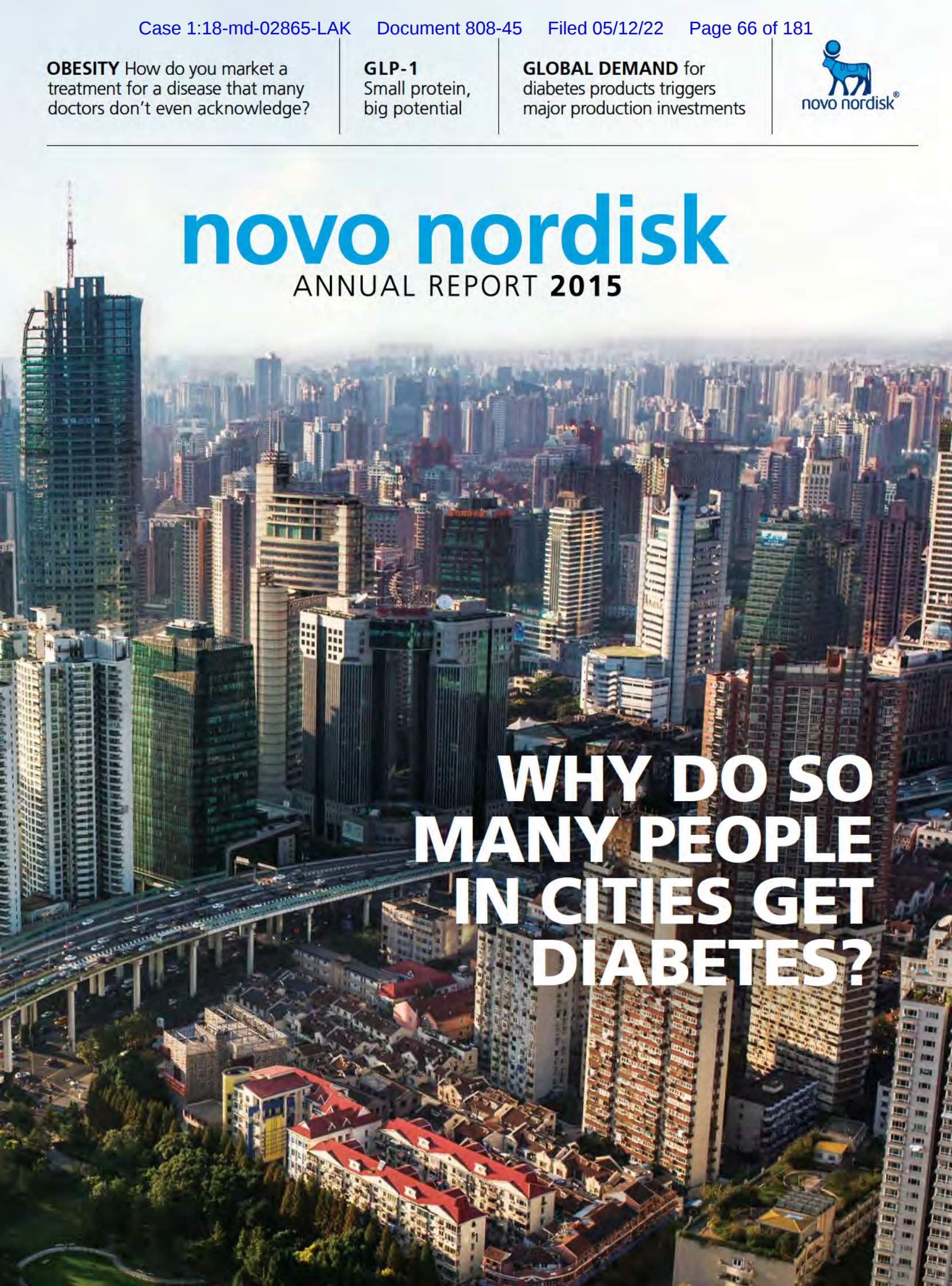
**GLP-1**  
Small protein,  
big potential

**GLOBAL DEMAND** for  
diabetes products triggers  
major production investments



# novo nordisk

## ANNUAL REPORT 2015



**WHY DO SO  
MANY PEOPLE  
IN CITIES GET  
DIABETES?**



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All references can be found on [p 113](#).

The Management review, as defined by the Danish Financial Statements Act (FSA), is found on [pp 1–54 and 95](#). This Annual Report is published in English only. A shorter version, consisting of the Management review and excerpts from the consolidated statements, is available in Danish. In the event of any discrepancies, the English version shall prevail.



# A GOOD YEAR

## LETTER FROM THE CHAIRMAN

2015 was a good year for Novo Nordisk. This is how the Board of Directors sees it when taking stock of the year that is now behind us. I hope that you will agree with us.

In a difficult and changing environment for the pharmaceutical industry, Novo Nordisk delivered on the forecasts it made at the beginning of the year, both in terms of sales growth and profit growth. Equally important was the encouraging progress in the company's pipeline of new and upcoming products, which bodes well for the future.

In his review of the year on the following pages, President and CEO Lars Rebieen Sørensen highlights some of the key developments and achievements in 2015, including the launch of Saxenda® for the treatment of obesity, the flow of encouraging phase 2 and 3 data regarding semaglutide in both an injectable and an oral version for type 2 diabetes, and, of course, the long-awaited approval of Tresiba® in the US.

These achievements are the result of a very robust long-term strategy and excellent execution by the entire Novo Nordisk organisation. Every year we spend a considerable amount of time in board meetings and in meetings with members of Executive Management reviewing this strategy – challenging assumptions and bringing in new perspectives to be sure not only that the company's strategic priorities are the right ones, but also that the organisation has the capabilities needed to execute them.

If you have been following Novo Nordisk for some years, you will notice from the article on [pages 16–17](#) that we have not made any significant changes to the strategy in 2015. This means the company will retain its sharp focus on just four disease areas: diabetes, obesity, haemophilia and growth disorders. Many of our discussions last year focused on how best to ensure that Novo Nordisk can continue its track record of innovation within these areas, so that we will have new and better medicines also in the coming decades for people with these serious chronic conditions. This requires further expansion of our research organisations in Europe, the US and China, and also that we become even more active in forming partnerships with biotech companies and universities that have knowledge and technologies that complement what we have in-house.

One of the main responsibilities of a board is to ensure that the company has the right executive leadership and that there are solid succession plans in place for top management. In April, we announced significant changes to the organisation's leadership, elevating the heads of our commercial activities in the US, Europe and International Operations, and of Product Supply to Executive Management. Moreover, Jakob Riis, executive vice president, Marketing, Medical Affairs and Stakeholder Engagement, was given additional responsibility for China, Japan, Korea, Australasia and Canada. The Board also decided that CEO Lars Rebieen Sørensen should remain in his role until he approaches the end of his contract, which expires in 2019.

These changes enhance the visibility of Novo Nordisk's international business operations to the Board at a time when the company is preparing for global launches of several key products and embarking on an unprecedented investment programme in new production facilities. In addition, they support the further development of our key leadership talent.

As a result of the changes, Kåre Schultz, president and COO, decided to continue his professional career outside Novo Nordisk. I wish him all the

best and thank him for his achievements over many years at Novo Nordisk. Lars Rebieen Sørensen now has the additional role of chairman of the Operations Committee, with Lars Fruergaard Jørgensen, executive vice president, Corporate Development, as vice chair.

In light of Novo Nordisk's solid performance in 2015, the Board will at the Annual General Meeting propose a 28% increase in dividend to 6.40 Danish kroner per share. Furthermore, the Board has decided to initiate a new share repurchase programme of up to 14 billion kroner, which will commence in February 2016, and intends to introduce an interim dividend for 2016 in August 2016.

With the financial results for 2015, we have achieved the long-term financial targets that we last revised in January 2013. In light of the significant improvement in operating margin during the past years and the need to invest in sustaining sales growth, further improvement of the operating margin is not a strategic priority in the coming years. Reflecting this, we have set the long-term target for operating profit growth at 10%, underlining our confidence in the growth outlook for the company.

On behalf of the Board of Directors, I would like to express my appreciation for the leadership shown by Lars Rebieen Sørensen and his management team, and for the hard work and dedication of the entire Novo Nordisk organisation.



**Göran Ando**  
Chairman of the Board of Directors



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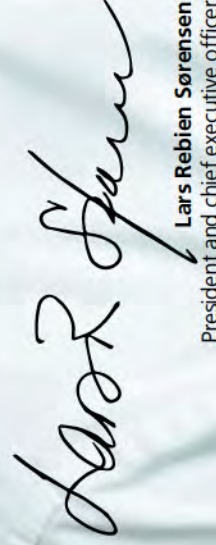
From a regional perspective, North America accounted for 62% of sales growth, followed by International Operations and Region China. It is also in these regions that we expect to see most of the growth in the coming years, although we have had to lower our short-term growth projections for China due to a combination of lower economic growth, pricing reforms and increased competition from both local and global competitors.

In the performance review starting on **page 6** and in subsequent articles in this Annual Report, you can read more about some of the topics I have mentioned in my letter. I hope they will give you a good sense of why, despite the challenging business environment for the pharmaceutical industry, I remain optimistic about the future for Novo Nordisk. The need for medical treatment and better pharmaceuticals is there, not least in many emerging economies. We will do our best to meet these needs and, in doing so, create value for our shareholders and for society at large by the knowledge we generate, the taxes we pay and the jobs we create.

So what about 2016? I predict another exciting and challenging year. There will be an intense news flow from our pipeline, including the results of the two large cardiovascular outcomes trials: LEADER regarding Victoza® and DEVOTE regarding insulin degludec. Plus, of course, there will be a lot of attention on how Tresiba® performs in the all-important US market. You will find a table of key pipeline events on **page 21** and our financial outlook for 2016 on **page 8**.

As always, I take great pleasure in working with my Executive Management team, our Senior Management Board and the Board of Directors on making the most of the opportunities and dealing with the challenges ahead. As mentioned by our Chairman, Göran Ando, in his letter, we had a reorganisation of Executive Management in 2015, which led to Kåre Schultz, our chief operating officer for many years, seeking new opportunities outside Novo Nordisk. I have worked with Kåre for as long as I can remember and have great respect for his capabilities and what he has done for Novo Nordisk over the years. I wish him all the best in his new career.

Last but not least, I would like to thank everyone in the Novo Nordisk organisation for their contributions to our results in 2015, the people who use our products for their confidence in us, our stakeholders and partners for their collaboration and our shareholders for their continued support.



**Lars Rebien Sørensen**  
President and chief executive officer





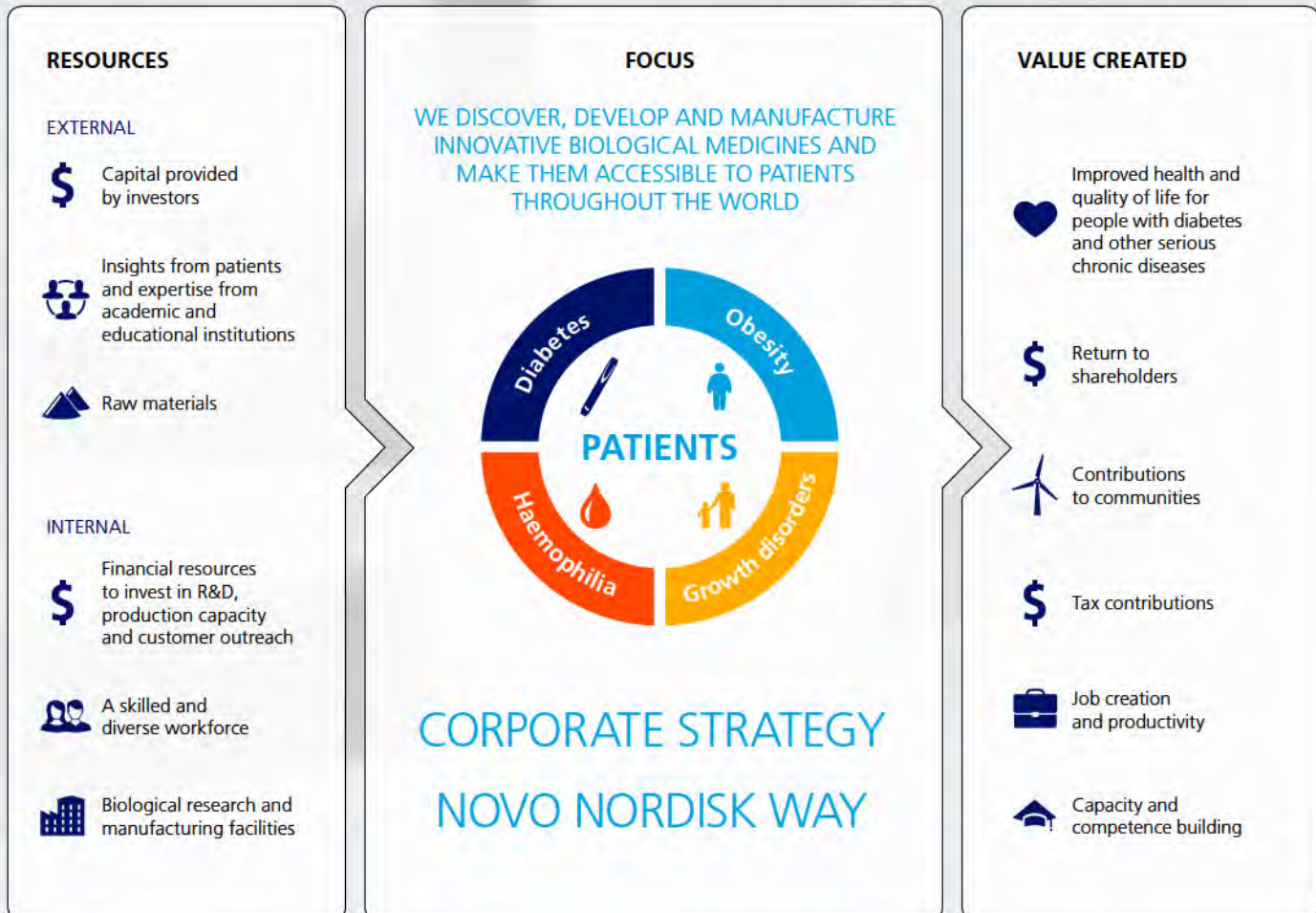
# NOVO NORDISK AT A GLANCE

Novo Nordisk is a global healthcare company with more than 90 years of innovation and leadership in diabetes care. This heritage has given us experience and capabilities that also enable us to help people defeat other serious chronic conditions: haemophilia, growth disorders and obesity. For more information, visit [novonordisk.com](https://www.novonordisk.com), [Twitter](#), [LinkedIn](#), [YouTube](#) and [Facebook](#).

## OUR BUSINESS MODEL

### HOW NOVO NORDISK CREATES AND SUSTAINS VALUE

Taking a patient-centred approach, Novo Nordisk provides innovation for the benefit of all of the company's stakeholders. The Triple Bottom Line principle, anchored in the Novo Nordisk Way, is the foundation that makes it possible to optimise the use of resources and maximise value creation in a sustainable way.





## A GLOBAL ORGANISATION WITH A LOCAL PRESENCE



HEADQUARTERED  
IN DENMARK  
ESTABLISHED IN 1923



PRODUCTS MARKETING  
IN 180+ COUNTRIES

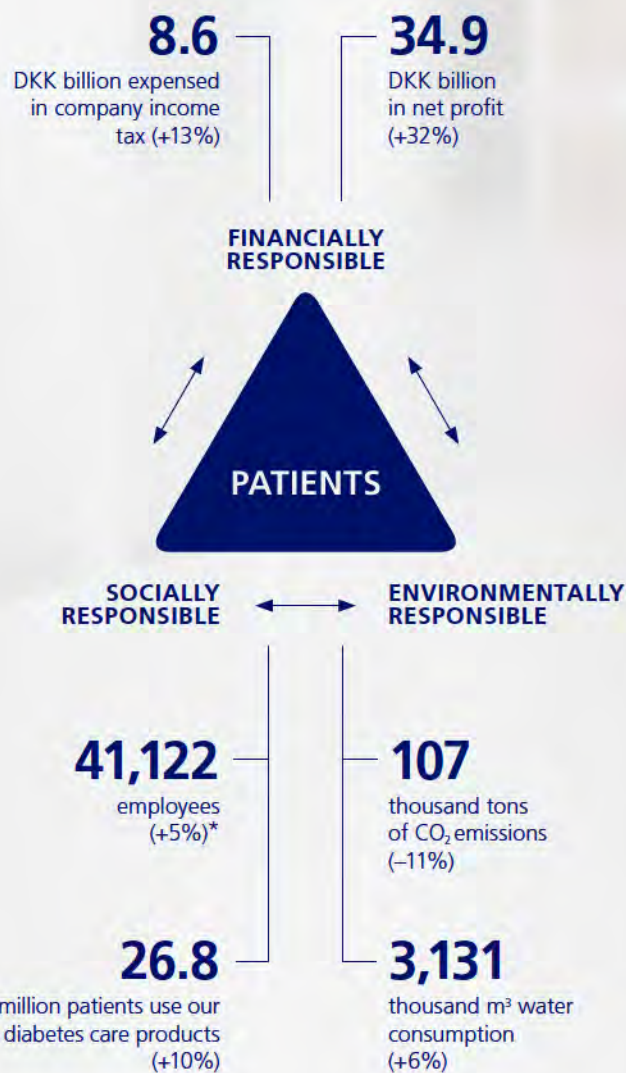


AFFILIATES OR  
OFFICES IN  
75 COUNTRIES



RESEARCH AND  
DEVELOPMENT  
FACILITIES ON  
3 CONTINENTS

## THE TRIPLE BOTTOM LINE



## THE PEOPLE WE FOCUS ON



**415**

MILLION PEOPLE LIVE WITH  
**DIABETES<sup>1</sup>**



**600**

MILLION PEOPLE LIVE WITH  
**OBESITY<sup>2</sup>**



**0.4**

MILLION PEOPLE LIVE WITH  
**HAEMOPHILIA<sup>3</sup>**



**3**

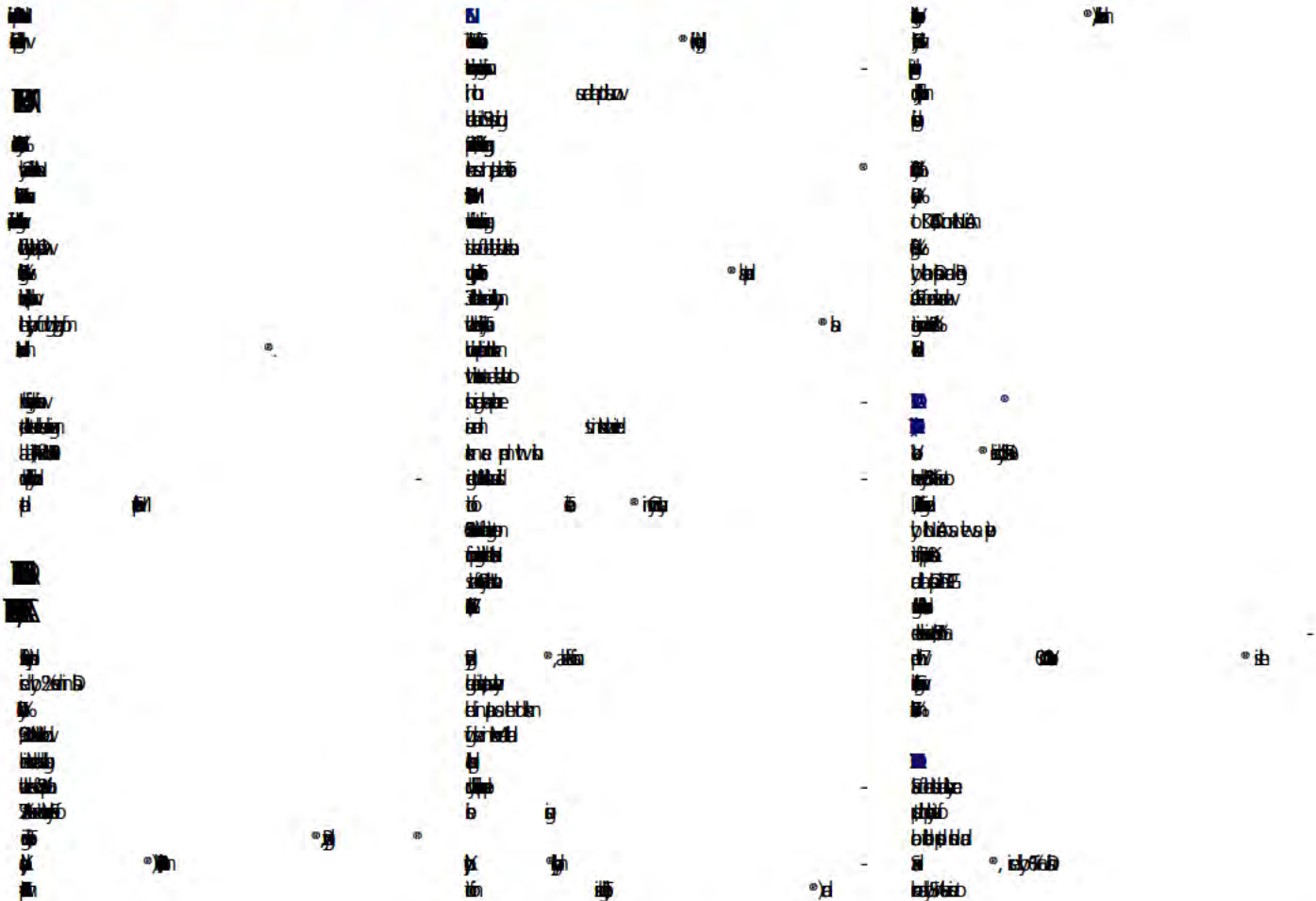
OUT OF 10,000 CHILDREN LIVE WITH  
**GROWTH DISORDERS<sup>4</sup>**

\* Excluding employees in NNIT A/S, which was divested in 2015.



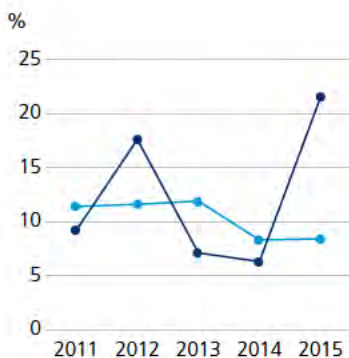
# 2015 PERFORMANCE

## FINANCIAL PERFORMANCE



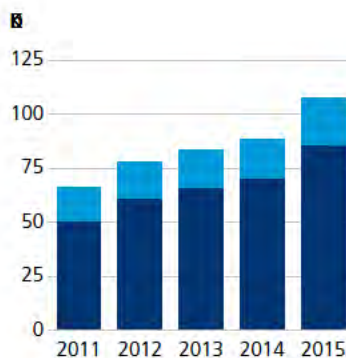
SALESGROWTH

● 2011  
● 2012



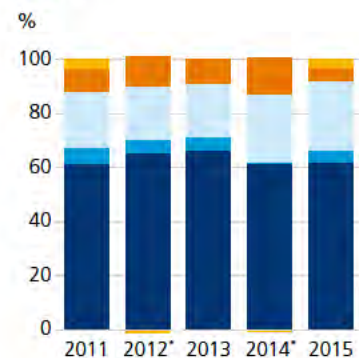
SALES BY SEGMENT

■ 2011  
■ 2012



SHARE OF GROWTH  
IN LOCAL CURRENCIES

■ 2011  
■ 2012  
■ 2013  
■ 2014  
■ 2015

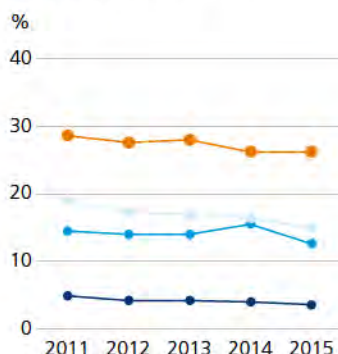




**DEVELOPMENT IN COSTS**

Costs in % of sales

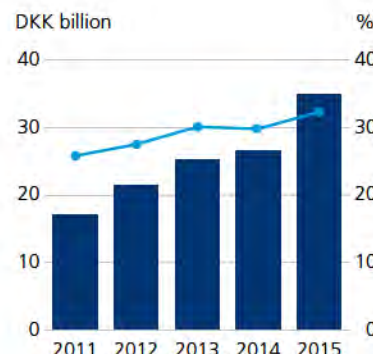
- Sales and distribution
- Cost of goods sold
- Research and development
- Administration

**OPERATING PROFIT**

- Operating profit margin (right)
- Operating profit (left)

**NET PROFIT**

- Net profit margin (right)
- Net profit (left)



DKK 4,730 million. This reflects a significant positive contribution from the US launch of Saxenda®, liraglutide 3 mg for weight management, in May 2015. In the US, Saxenda® has broad market access in the commercial segment, launch activities are progressing as planned and feedback from patients and prescribers is encouraging. Declining sales of needles in Europe and oral anti-diabetics in North America and International Operations partly offset sales growth.

## BIOPHARMACEUTICALS SALES DEVELOPMENT

Sales of biopharmaceutical products increased by 19% measured in Danish kroner and by 6% in local currencies to DKK 22,337 million. Sales growth is primarily driven by North America, International Operations and Europe.

**HAEMOPHILIA**

Sales of haemophilia products increased by 14% in Danish kroner and by 3% in local currencies to DKK 10,647 million. The growth in local currencies is primarily driven by the roll-out of NovoEight® in Europe, Japan and the US as well as by NovoSeven® in International Operations, partly offset by lower NovoSeven® sales in the US and Japan.

### NORDITROPIN® (GROWTH HORMONE THERAPY)

Sales of Norditropin® increased by 20% in Danish kroner and by 8% in local currencies to DKK 7,820 million. The sales growth is primarily derived from North America, reflecting favourable pricing and increased demand driven by the pre-filled FlexPro® device as well as Latin American and Middle East markets in International Operations. Novo Nordisk is the leading company in the global growth hormone market, with a 32% market share measured in volume.

**OTHER BIOPHARMACEUTICALS**

Sales of other products within biopharmaceuticals, which predominantly consist of hormone replacement therapy-related (HRT) products, increased by 28% in Danish kroner and by 13% in local currencies to DKK 3,870 million. Sales growth is driven by a positive impact from pricing of Vagifem® in the US.

## DEVELOPMENT IN COSTS AND OPERATING PROFIT

The cost of goods sold increased by 11% to DKK 16,188 million, resulting in a gross margin of 85.0%, compared with 83.6% in 2014. This reflects a positive currency impact of 1.5 percentage points and a positive impact from the product mix, primarily due to increased sales of Victoza® and modern insulin. This is countered by ramp-up costs for new manufacturing capacity.

Sales and distribution costs increased by 22% in Danish kroner and by 9% in local currencies to DKK 28,312 million. The increase in costs is driven by US launch costs related to Saxenda® and NovoEight® and by preparations for the Tresiba® launch in the US, sales force investments in selected countries in International Operations as well as adjustments to legal provisions.

Research and development costs decreased by 1% in Danish kroner and by 6% in local currencies to DKK 13,608 million. Excluding all costs related to inflammatory disorders, an area which Novo Nordisk exited in September 2014, research and development costs increased by 8% compared to 2014. The increase in underlying costs reflects the progression of the late-stage diabetes care portfolio and is primarily driven by the cardiovascular outcomes trial DEVOTE for insulin degludec and the phase 3a programme SUSTAIN for the once-weekly GLP-1

analogue semaglutide. The increase in costs is partly offset by lower costs related to faster-acting insulin aspart following the completion of the phase 3a development programme onset in August 2015.

Administration costs increased by 9% in Danish kroner and by 4% in local currencies to DKK 3,857 million.

Other operating income (net) was DKK 3,482 million, compared with DKK 770 million in 2014. The increase is driven by the DKK 2,376 million non-recurring income from the partial divestment of NNIT A/S, an IT service and consultancy company, in connection with the Initial Public Offering on Nasdaq Copenhagen under the symbol 'NNIT' (ISIN DK0060580512) as well as the DKK 449 million non-recurring income related to the out-licensing of assets for inflammatory disorders.

Operating profit increased by 43% in Danish kroner to DKK 49,444 million. In local currencies the growth was 21%, which is slightly higher than the latest guidance for operating profit growth measured in local currencies for 2015 of 'around 20%'. Adjusted for the income related to the partial divestment of NNIT A/S, the growth in operating profit was 14% in local currencies.

## NET FINANCIALS AND TAX

Net financials showed a net loss of DKK 5,961 million, compared with a net loss of DKK 396 million in 2014. The reported net financial loss in 2015 is larger than the latest guidance of 'around DKK 5.6 billion', primarily reflecting higher than expected losses on commercial balances following the depreciation of the Argentine peso in December 2015 as well as an effect from the depreciation of the Russian rouble and the Brazilian real during the fourth quarter of 2015.

CONTINUED ►



In line with Novo Nordisk's treasury policy, the most significant foreign exchange risks for the Group have been hedged, primarily through foreign exchange forward contracts. The foreign exchange result was a loss of DKK 5,898 million compared with a loss of DKK 381 million in 2014. This development reflects losses on foreign exchange hedging involving especially the US dollar due to its appreciation versus the Danish krone compared with the prevailing exchange rates in 2014. As of 31 December 2015, foreign exchange hedging losses of around DKK 700 million have been deferred for recognition in the income statement in 2016.

The effective tax rate for 2015 was 19.8%, which is in line with the latest guidance of a tax rate of 'around 20%' for the full year 2015. The lower tax rate compared with the 2014 level of 22.3% primarily reflects the tax-free gain from the partial divestment of NNIT A/S, the gradual reduction of the corporate income tax rate in Denmark from 24.5% in 2014 to 23.5% in 2015 as well as changes in provisions related to international tax cases.

## CAPITAL EXPENDITURE AND FREE CASH FLOW

Net capital expenditure for property, plant and equipment was DKK 5.2 billion, compared with DKK 4.0 billion in 2014, which is in line with the latest guidance of 'around DKK 5.0 billion'. Net capital expenditure was primarily related to investments in additional insulin filling capacity, expansion of the manufacturing capacity for biopharmaceutical products and the construction of new research facilities.

Free cash flow was DKK 34.2 billion, compared with DKK 27.4 billion in 2014, which is in line with the latest guidance of 'DKK 33–35 billion'. The increase of 25% compared with 2014 primarily reflects the increased cash flow from operating activities as well as the non-recurring proceeds from the partial divestment of NNIT A/S.

## OUTLOOK 2016

Sales growth for 2016 is expected to be 5–9% measured in local currencies. This reflects expectations for continued robust performance for the portfolio of modern insulin, Victoza® and Tresiba® as well as a

## OUTLOOK 2016

The current expectations for 2016 are summarised in the table below:

### EXPECTATIONS ARE AS REPORTED, IF NOT OTHERWISE STATED

EXPECTATIONS  
3 FEBRUARY 2016

<b>Sales growth</b>	
• in local currencies	5–9%
• as reported	Around 1 percentage point lower
<b>Operating profit growth*</b>	
• in local currencies	5–9%
• as reported	Around 1 percentage point lower
<b>Net financials</b>	Loss of around DKK 1.3 billion
<b>Effective tax rate</b>	20–22%
<b>Capital expenditure</b>	Around DKK 7.0 billion
<b>Depreciation, amortisation and impairment losses</b>	Around DKK 3.0 billion
<b>Free cash flow</b>	DKK 36–39 billion

\* Adjusted DKK 2,376 million for the partial divestment of NNIT A/S and DKK 449 million for the income related to the out-licensing of assets for inflammatory disorders, both in 2015.

contribution from Saxenda® and Xultophy®. These sales drivers are expected to be partly countered by an impact from a contract loss in the US, healthcare reforms, the loss of exclusivity for products within hormone replacement therapy, intensifying competition within diabetes and biopharmaceuticals as well as macroeconomic conditions in China and a number of markets in International Operations. Given the current level of exchange rates versus the Danish krone, growth reported in DKK is expected to be around 1 percentage point lower than the local currency level.

For 2016, operating profit growth is expected to be 5–9% measured in local currencies, adjusted by DKK 2,376 million for the partial divestment of NNIT A/S and by DKK 449 million for the income related to the out-licensing of assets for inflammatory disorders, both in 2015. The expectations for operating profit growth reflect growth in selling and distribution costs to support continued launch activities as well as in research and development costs to support the progress of Novo Nordisk's pipeline. Given the current level of exchange rates versus the Danish krone, growth reported in DKK is expected to be around 1 percentage point lower than the local currency level.

For 2016, Novo Nordisk expects a net financial loss of around DKK 1.3 billion. The current expectation primarily reflects losses associated with foreign exchange hedging contracts, mainly related to the appreciation of the US

dollar versus the Danish krone compared to the prevailing exchange rates in 2015.

The effective tax rate for 2016 is expected to be in the range of 20–22%.

Capital expenditure is expected to be around DKK 7.0 billion in 2016, primarily related to investments in an expansion of the manufacturing capacity for biopharmaceutical products, additional capacity for active pharmaceutical ingredient production within diabetes care, an expansion of the insulin filling capacity and construction of new research facilities. Depreciation, amortisation and impairment losses are expected to be around DKK 3.0 billion. Free cash flow is expected to be DKK 36–39 billion.

All of the above expectations are based on the assumption that the global economic environment will not significantly change business conditions for Novo Nordisk during 2016, and that currency exchange rates, especially the US dollar, will remain at the current level versus the Danish krone.

Novo Nordisk has hedged expected net cash flows in a number of invoicing currencies and, all other things being equal, movements in key invoicing currencies will impact Novo Nordisk's operating profit as outlined in the table to the left.

## LONG-TERM FINANCIAL TARGETS

Novo Nordisk introduced four long-term financial targets in 1996 to balance short- and long-term considerations, thereby ensuring a focus on shareholder value creation. The targets were subsequently revised and updated on several occasions, most recently in connection with the annual results for 2012 released in January 2013.

KEY INVOICING CURRENCIES	ANNUAL IMPACT ON NOVO NORDISK'S OPERATING PROFIT OF A 5% MOVEMENT IN CURRENCY	HEDGING PERIOD (MONTHS)
USD	DKK 2,000 million	12
CNY	DKK 300 million	11*
JPY	DKK 150 million	12
GBP	DKK 85 million	11
CAD	DKK 70 million	11

\* USD and Chinese yuan traded offshore (CNH) used as proxy when hedging Novo Nordisk's CNY currency exposure.



PERFORMANCE AGAINST LONG-TERM FINANCIAL TARGETS	Result 2015	Average 2012–2015*	Previous target	Updated target
Operating profit growth	43%	23%	15%	10%
Operating margin	46%	40%	40%	N/A**
Operating profit after tax to net operating assets	149%	111%	125%	125%
Cash to earnings	98%			
Cash to earnings (three-year average)	97%	97%	90%	90%

\* Calculated as a simple average. \*\* A new target has not been established, as operating margin is expected to remain around 44%.

In 2015, Novo Nordisk reached these four long-term financial targets and consequently, the Board of Directors has approved three updated long-term financial targets to guide Novo Nordisk's performance. The targets have been revised based on an assumption of a continuation of the current business environment. Significant changes to the business environment, including the structure of the US healthcare system, regulatory requirements, pricing and market access environment, competitive environment, healthcare reforms, exchange rates and changes to accounting standards may significantly impact the time horizon for achieving the long-term targets or require them to be revised.

The target level for long-term operating profit growth has been set at 10%, reflecting the current outlook for organic sales growth and opportunities for operating margin leverage.

Novo Nordisk's current operating margin level of 43.6% (adjusted for the effect of the partial divestment of NNIT A/S) has been achieved by continuous improvement in manufacturing efficiency, positive pricing impact, sales and distribution leverage, reprioritisation of focus areas within research and development as well as administrative efficiencies. It is a strategic priority to continue to invest in future organic sales growth, and as a consequence operating margin improvement is not expected to be a major contributor to operating profit growth. This expectation reflects an expanded product portfolio, a significant number of product launches and continued investments within research and development. Consequently, no target for operating margin has been established, as the operating margin is expected to remain at the current level around 44%.

The target level for operating profit after tax to net operating assets is unchanged at 125%. The target reflects the expectation of a continued robust operating profit growth combined with a stable effective tax rate and gradual increase in net operating assets, partly related to an expanded fixed asset investment to sales ratio to accommodate future sales growth, primarily within diabetes care.

The target level for the cash to earnings ratio is maintained at 90%, as expected continued growth in International Operations and expanding investment priorities will gradually impact net operating assets. As previously, and given the inherent volatility in this ratio, the target will be pursued looking at the average over a three-year period.

## FORWARD-LOOKING STATEMENTS

Novo Nordisk's reports filed with or furnished to the US Securities and Exchange Commission (SEC), including this document and Form 20-F, both expected to be filed with the SEC in February 2016, and written information released, or oral statements made, to the public in the future by or on behalf of Novo Nordisk, may contain forward-looking statements. Words such as 'believe', 'expect', 'may', 'will', 'plan', 'strategy', 'prospect', 'foresee', 'estimate', 'project', 'anticipate', 'can', 'intend', 'target' and other words and terms of similar meaning in connection with any discussion of future operating or financial performance identify forward-looking statements. Examples of such forward-looking statements include, but are not limited to:

- statements of targets, plans, objectives or goals for future operations, including those related to Novo Nordisk's products, product research, product development, product introductions and product approvals as well as cooperation in relation thereto
- statements containing projections of or targets for revenues, costs, income (or loss), earnings per share, capital expenditures, dividends, capital structure, net financials and other financial measures
- statements regarding future economic performance, future actions and outcome of contingencies, such as legal proceedings
- statements regarding the assumptions underlying or relating to such statements.

In this document, examples of forward-looking statements can be found under the heading '2015 performance and 2016 outlook' and elsewhere.

These statements are based on current plans, estimates and projections. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific. Novo Nordisk cautions that a number of important factors, including those described in this document, could cause actual results to differ materially from those contemplated in any forward-looking statements.

Factors that may affect future results include, but are not limited to, global as well as local political and economic conditions, including interest rate and currency exchange rate fluctuations, delay or failure of projects related to research and/or development, unplanned loss of patents, interruptions of supplies and production, product recalls, unexpected contract breaches or terminations, government-mandated or market-driven price decreases for Novo Nordisk's products, introduction of competing products, reliance on information technology, Novo Nordisk's ability to successfully market current and new products, exposure to product liability and legal proceedings and investigations, changes in governmental laws and related interpretation thereof, including on reimbursement, intellectual property protection and regulatory controls on testing, approval, manufacturing and marketing, perceived or actual failure to adhere to ethical marketing practices, investments in and divestitures of domestic and foreign companies, unexpected growth in costs and expenses, failure to recruit and retain the right employees, and failure to maintain a culture of compliance.

Please also refer to the overview of risk factors on [pp 42–43](#).

Unless required by law, Novo Nordisk is under no duty and undertakes no obligation to update or revise any forward-looking statement after the distribution of this document, whether as a result of new information, future events or otherwise.



## RESEARCH AND DEVELOPMENT

2015 was a year in which Novo Nordisk made significant progress in its research and development pipeline and reached several milestones.

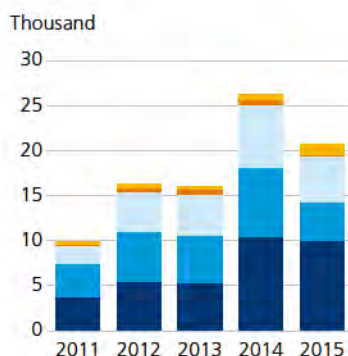
Below are the highlights from the key development projects. On p 20, the pipeline overview shows all the compounds in clinical development, and further details on clinical trials can be found in the company announcements and press releases published by Novo Nordisk during 2015, which are available on [novonordisk.com](http://novonordisk.com).

### DIABETES

In March 2015, Novo Nordisk decided to resubmit New Drug Applications (NDA) of Tresiba® and Ryzodeg® 70/30 in the US. The resubmission was based on the interim analysis of the cardiovascular outcomes trial for Tresiba®, DEVOTE. In order to preserve the integrity of the ongoing DEVOTE trial, only a small team within Novo Nordisk had access to the data and made the decision to resubmit the NDA. Novo Nordisk management does not have access to the results of the interim analysis. The DEVOTE trial is expected to be completed in mid-2016 and the results are expected to be announced in the second half of 2016.

Based on the class II resubmission, the US Food and Drug Administration (FDA) approved Tresiba® and Ryzodeg® 70/30 for the treatment of diabetes in adults in September 2015. Following the approval, Tresiba® was introduced to diabetes care specialists in the US during November 2015 and was launched broadly in January 2016.

#### PATIENT YEARS IN CLINICAL TRIALS\*



\* A patient year is measured as the total number of months a patient is enrolled in a clinical trial divided by 12.

In January 2016, the results from the double-blinded phase 3b trial SWITCH 2 were announced. The primary endpoint of the trial was met by showing a statistically significantly lower rate of severe or blood glucose confirmed symptomatic hypoglycaemia during the maintenance period of 30% for people treated with Tresiba® compared to insulin glargine.

In August 2015, Novo Nordisk decided to initiate a phase 3a programme with oral semaglutide, a once-daily oral formulation of the long-acting GLP-1 analogue semaglutide. The decision followed the encouraging results of the proof-of-concept phase 2 trial announced in February 2015 and the subsequent consultations with regulatory authorities. The successful phase 2 trial results mark a significant milestone for Novo Nordisk in its ambition to deliver protein-based medicine, like semaglutide, in the form of a tablet and producing it in large scale.

Novo Nordisk intends to initiate a global phase 3a programme, named PIONEER, comprising ten trials with more than 9,000 people with type 2 diabetes. The PIONEER programme will include nine safety and efficacy trials and one trial for evaluating the cardiovascular safety of oral semaglutide. In September 2015, Novo Nordisk filed the NDA to the US FDA for Xultophy®, the first once-daily single-injection combination of Tresiba® (insulin degludec) and Victoza® (liraglutide). The submission is currently being reviewed under the US FDA's Prescription Drug User Fee Act V (PDUFA V).

During the second half of 2015, Novo Nordisk completed four out of six phase 3a trials with semaglutide in the SUSTAIN programme. Semaglutide is a new GLP-1 analogue administered subcutaneously once weekly for the treatment of type 2 diabetes in adults. The data reported so far confirm the strong efficacy profile of semaglutide, which also appeared safe and well tolerated in the trials.

In December 2015, Novo Nordisk submitted the Marketing Authorisation Application (MAA) to the European Medicines Agency (EMA) and the NDA to the US FDA for faster-acting insulin aspart. Faster-acting insulin aspart is a mealtime insulin for improved control of postprandial glucose excursions and has been developed for the treatment of people with type 1 and type 2 diabetes.

The filing of faster-acting insulin aspart is based on the results from the onset clinical

trial programme, which involved around 2,100 people with type 1 and 2 diabetes. In the onset programme, people treated with faster-acting insulin aspart achieved improvements in postprandial control versus NovoRapid® and an HbA<sub>1c</sub> reduction on par with NovoRapid®. Across the onset trials, faster-acting insulin aspart had a safe and well-tolerated profile, with the most common adverse event being hypoglycaemia similar to the levels observed with NovoRapid®.

### OBESITY

In March 2015, the European Commission granted marketing authorisation for Saxenda® (liraglutide 3 mg) for the treatment of obesity. Saxenda® is the first once-daily human glucagon-like peptide-1 (GLP-1) analogue for the treatment of obesity approved in Europe. Saxenda® is indicated in the EU as an adjunct to a reduced-calorie diet and increased physical activity for weight management in adult patients with an initial Body Mass Index (BMI) of  $\geq 30$  kg/m<sup>2</sup> (obese), or  $\geq 27$  kg/m<sup>2</sup> to  $< 30$  kg/m<sup>2</sup> (overweight) in the presence of at least one weight-related comorbidity such as dysglycaemia, hypertension, dyslipidaemia or obstructive sleep apnoea. Saxenda® was launched in Denmark in August 2015. Earlier in the year, during May, Saxenda® had already been launched in the US, following the US FDA approval in December 2014. Novo Nordisk will continue the global roll-out of Saxenda® during 2016 and expects to launch it in up to ten countries.

### HAEMOPHILIA

In January 2016, Novo Nordisk submitted the MAA to the EMA for the approval of long-acting factor IX, nonacog beta pegol. Nonacog beta pegol is a glycopegylated recombinant factor IX with a significantly improved pharmacokinetic (PK) profile, developed for patients with haemophilia B. Novo Nordisk expects to file the Biologics License Application (BLA) for nonacog beta pegol to the US FDA during the first half of 2016.

New data for long-acting recombinant factor VIII, N8-GP (turoctocog alfa pegol) was reported from the first part of the pathfinder™2 extension trial in November 2015. The reported data provide additional support that N8-GP (turoctocog alfa pegol) appeared to have a safe and well-tolerated profile, and that 95% of mild to moderate bleeds can be managed with 1–2 infusions.



## SOCIAL PERFORMANCE

Social performance has three dimensions: improving access to medical treatment and quality of care for patients, offering a healthy and engaging working environment, and providing assurance that responsible business practices are in place, with the aim of contributing to the communities in which the company operates.

### PATIENTS

Just over half of the 415 million people living with diabetes<sup>1</sup> are diagnosed, and many of those diagnosed do not receive medical treatment.

As part of Novo Nordisk's strategy for global access to diabetes care, the company has set itself the long-term target of reaching 40 million people with its diabetes care products by 2020, which is double the baseline number in 2010. The aim is to enable more people with diabetes to receive medical treatment.

In 2015, Novo Nordisk provided medical treatments to an estimated 26.8 million patients with diabetes worldwide, compared with 24.4 million in 2014, calculated based on WHO's recommended daily doses for diabetes medicines. The number reflects an overall increase in the number of patients treated with Novo Nordisk's insulin products and was driven by human insulin in International Operations (1.2 million patients) and modern and new-generation insulins globally (0.9 million patients). Novo Nordisk focuses on enhancing quality of care through product innovation, while remaining committed to expanding access to medical treatment and care for patients with diabetes throughout the world. The company has several programmes specifically targeting people in low- and middle-income countries who have limited access to health services.

Novo Nordisk sold human insulin according to the company's differential pricing policy in 23 of the world's 48 poorest countries (the Least Developed Countries – LDC), compared with 32 countries in 2014. According to this policy, the price should not exceed 20% of the average insulin price in the western world (defined as the EU, Norway, Switzerland, the US, Canada and Japan). In 2015, the LDC ceiling price for insulin treatment per patient per day was USD 0.19, while the average realised price for insulin sold under the programme was USD 0.15, corresponding to USD 3.85 per vial. The decline is attributed to fewer insulin tenders in 2015 and lack of response from governments or private wholesalers and other partners to Novo

Nordisk's offer. The total number of patients treated with insulins sold at or below ceiling price was approximately 411,000 in 2015, which is a slight decrease compared with approximately 431,000 in 2014. Beyond this scheme, Novo Nordisk sells human insulin at similar prices in low-income countries. In 2015, an estimated 5.5 million patients have been treated with insulin for USD 0.19 per day or less, corresponding to a price per vial of USD 4.81 or less. In comparison, an estimated 4.3 million patients were treated with insulin at or below the ceiling price in 2014.

By the end of 2015, continued progress had been achieved by Changing Diabetes® programmes with the aim of reaching more people with diabetes and building capacity. The Changing Diabetes® in Children programme has been rolled out in nine countries since its launch in 2009, reaching more than 3,400 children, who receive insulin treatment free of cost. A total of 108 clinics have been established, and more than 6,500 healthcare professionals have been trained or re-trained. The Changing Diabetes® in Pregnancy programme, also launched in 2009, has since screened more than 33,300 women for gestational diabetes mellitus, and more than 3,800 women have been diagnosed and subsequently treated. The Base of the Pyramid programme has, since its launch in 2011, established seven Diabetes Support Centres in Nigeria and six in Ghana. The programme has been scaled up in Kenya to build capacity and ensure supply. Furthermore, two new Centres of Excellence in Diabetes care were launched in the Kenyan public sector at county level in 2015.

In 2014, Novo Nordisk launched Cities Changing Diabetes – a cross-disciplinary and cross-sector partnership programme to identify and address the root causes of the rise in type 2 diabetes in urban areas. The programme is currently running in Mexico City, Copenhagen, Houston, Tianjin and Shanghai, representing more than 60 million inhabitants. In 2016, they will be joined by Vancouver and Johannesburg. The aim of the programme is to drive transformative action through new research focusing on cultural determinants and social factors that will facilitate the implementation of integrated and sustainable solutions in cities.

Donations through the World Diabetes Foundation (WDF) amounted to DKK 78 million in 2015. The WDF is an independent non-profit organisation established by Novo Nordisk in 2002 to help expand access to diabetes care. The foundation invests in

sustainable initiatives to build healthcare capacity, with the aim of improving prevention and treatment of diabetes in developing countries. In 2015, the WDF supported 22 new projects. These included projects with a focus on prevention and others aimed at reaching people in the most remote rural areas. Read more on [worlddiabetesfoundation.org](http://worlddiabetesfoundation.org).

Novo Nordisk also provides financial support to improve global access to haemophilia care. In 2015, the company donated DKK 19 million to the Novo Nordisk Haemophilia Foundation, established in 2005. The foundation supports projects and fellowships in developing and emerging economies. Initiatives focus on capacity building, awareness, diagnosis and patient registries. Read more on [nnhf.org](http://nnhf.org).

### EMPLOYEES

At the end of 2015, the total number of employees was 41,122, corresponding to 40,638 full-time positions, which is a 1% decrease compared with 2014 due to the divestment of NNIT A/S in March 2015. The underlying growth (5%) is primarily driven by expansion within the sales region International Operations and in Denmark, primarily within research & development and production.

Employee turnover increased from 9.0% in 2014 to 9.2% and was primarily driven by Region China. In previous years the turnover rate has been 8–10%.

The consolidated score in the annual employee survey, eVoice, was 4.3 as in 2014, measured on a scale of 1 to 5, with 5 being the best score. The survey measures the extent to which the organisation is working in accordance with the Novo Nordisk Way. The 2015 result reflects a strong culture and commitment to the company's values.

To ensure a robust pipeline of talent for management positions, a new aspiration has been set that strives for enhanced diversity in all management teams, including entry-level and middle management. By the end of 2015, the gender diversity among managers was 59% men and 41% women. Of the newly promoted managers, 44% were women.

Tragically, a sales representative in India died in a traffic accident while on duty in 2015. The 2015 average frequency rate of occupational accidents with absence decreased to 3.0 per million working hours, compared with

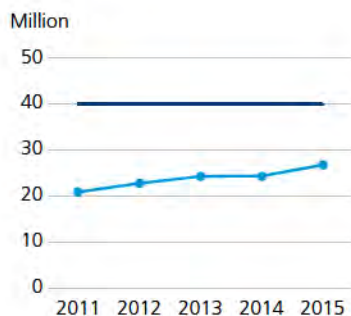
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**PATIENTS REACHED WITH DIABETES CARE PRODUCTS**

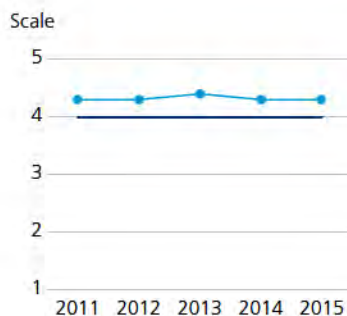
Estimate

● Realised  
— Target (2020)

**WORKING THE NOVO NORDISK WAY**

Average score in annual employee survey

● Realised  
— Target



3.2 in 2014. Novo Nordisk is working with a zero-injury mindset, and the long-term commitment is to continuously improve performance. Focus is on strengthening risk awareness and preventing occupational accidents for all employees.

**ASSURANCE**

Training in business ethics is mandatory and a high priority. Annual business ethics training is required for all employees, including new hires. Business ethics training is also a key element of the onboarding programmes. In 2015, as in 2014, 98% of all relevant employees completed and documented their training, and passed the related tests. This high level is attributed to the constant focus and communication by senior management on the importance of business ethics compliance.

Adherence to the company's global standards for ethical behaviour must be observed and is monitored. Internal business ethics assurance activities are conducted using on-site interviews and documentation reviews to assess adherence to compliance requirements and internal procedures. During 2015, 49 business ethics assurance reviews were conducted, compared with 42 in 2014.

During the year, the global facilitator team conducted 65 audits of units' adherence to the Novo Nordisk Way, so-called facilitations, covering approximately 18,500 employees, 15% of whom were interviewed. The facilitations conducted in 2015 showed a high level of compliance with the Novo Nordisk Way. A facilitation consists of document review and interviews with local management, employees and stakeholders to determine the level of adherence to the corporate values and expected behaviours spelled out in the Novo Nordisk Way.

Best practices are shared internally, while findings of non-compliance are reported to local management, which must subsequently implement corrective actions. In 2015, 94% of actions were closed on time. A summary report, presented to the Board of Directors, outlines key observations and trends across all facilitations, and the conclusion is that there was a high level of compliance with the Novo Nordisk Way across the organisation in 2015. The Essentials, of which there are 10, are the basis for the implementation of the Novo Nordisk Way. See the article on p 18 and [novonordisk.com/about-novo-nordisk/novo-nordisk-way](http://novonordisk.com/about-novo-nordisk/novo-nordisk-way) for additional information.

A total of 240 supplier audits were conducted to assess their level of compliance with the company's standards for suppliers. These relate to quality as well as the environment, labour, human rights and business ethics, in line with Novo Nordisk's responsible sourcing policy.

These audits are undertaken by Novo Nordisk's global quality organisation. The level of audit activity was up from 224 audits in 2014 due to Management's decision to build new factories. Of the audits carried out in 2015, 28 were focused on responsible sourcing criteria, which is a slight increase compared with 25 audits in 2014. Only high-risk suppliers, identified through a robust risk assessment, are selected for responsible sourcing audits. One critical finding was identified in connection with a quality audit in 2015. A continuous improvement and engagement programme has been initiated with the supplier in order to address the issue.

In 2015, as in 2014, Novo Nordisk had two product recalls from the market. Both recalls were related to incorrect labelling of products. Local health authorities were informed in both instances to ensure that distributors, pharmacies, doctors and patients received appropriate information.

In 2015, as in 2014, there were no failed inspections among those resolved at year-end. Inspections are measured in relation to the US Food & Drug Administration, European Medicines Agency (EMA), the Japanese Pharmaceuticals & Medical Devices Agency (PMDA), Lloyd's Register Quality Assurance (LRQA) and domestic authorities for strategic manufacturing sites. A total of 82 inspections were conducted in 2015 at Novo Nordisk sites, at clinics conducting investigations for Novo Nordisk or for voluntary ISO 9001 certification, compared with 59 inspections in 2014. At year-end, 57 inspections had been passed and 25 were unresolved.

Novo Nordisk is implementing its commitment to respect human rights as set out in the UN Guiding Principles on Business and Human Rights. The human rights due diligence started with a Group-wide human rights impact assessment against all internationally recognised human rights. Novo Nordisk recognises that the company has a number of potential impacts with regard to a range of human rights, right to health, right to privacy, right to a living wage, and safe and healthy working conditions. The assessment has shown that strong management systems are in place. Vigilance and continuous improvements are part of ongoing efforts.

A company's reputation with its key stakeholders is an indicator of the extent to which the company lives up to expectations. The better the reputation, the more likely it is that these stakeholders will trust, support and engage with the company. Novo Nordisk measures its reputation with key stakeholders annually using the RepTrak® methodology developed by Reputation Institute. Reputation is measured on a scale of 0–100 and a score above 80 is considered excellent. In 2015, the score was 82.4, compared with 80.8 in 2014.

**LONG-TERM SOCIAL TARGETS**

Novo Nordisk has chosen two long-term social targets to support long-term financial performance, balancing responsibility with profitability, with the aim of creating sustainable value for shareholders and other stakeholders. The social targets reflect aspirations expressed in the Novo Nordisk Way: helping people live better lives and working the Novo Nordisk Way. The long-term patient target is expected to be met. Development year on year will vary, reflecting gains and losses of large tenders and contracts.

For additional information about the social performance, see the social statement on pp 96–101 and the UNGC Communication on Progress at [novonordisk.com/annualreport](http://novonordisk.com/annualreport).



# ENVIRONMENTAL PERFORMANCE

Novo Nordisk measures environmental performance on four dimensions: consumption of energy, consumption of water, CO<sub>2</sub> emissions from energy consumption and waste.

## ENERGY AND WATER

In 2015, 2,778,000 GJ energy and 3,131,000 m<sup>3</sup> water were used at production sites around the world. In spite of a high focus on process optimisations, the energy consumption increased by 9% and the water consumption by 6%. This development reflects increased production and capacity. Of the water used at production sites, 14% is in water-scarce regions in Brazil and China. These sites have a particular focus on good water stewardship.

## CO<sub>2</sub> EMISSIONS

While the main focus of Novo Nordisk's climate action programme has been to reduce CO<sub>2</sub> emissions from production as well as emissions from distribution of products, Novo Nordisk is now extending the scope of the climate programme to encompass indirect emissions from relevant business activities. The initial focus is on the supply chain, and emissions from company cars and business travel. Refer to [p 40](#) for more information on the climate ambition.

The CO<sub>2</sub> emissions related to consumption of energy at the production facilities decreased by 11%, despite the increase in energy use of 9%. The production plant in Tianjin, China, has started sourcing wind power from a windfarm in Inner Mongolia, and the Danish production facilities are

now sourcing bio-natural gas. This is biogas produced from liquid manure, food waste and organic waste from the industry. The biogas is upgraded to meet the quality requirements of natural gas and feeds into the natural gas distribution system.

CO<sub>2</sub> emissions from transport (product distribution) decreased significantly, by 25%, compared with 2014. This is mainly due to an increase in the volume of products distributed via sea from 72% in 2014 to 83% in 2015. In 2015, CO<sub>2</sub> emissions from sea freight accounted for 16%, transport via trucks accounted for 5% and air transport accounted for 79% of total emissions. Distributing as many products as possible by sea is a priority for Novo Nordisk, as it reduces both CO<sub>2</sub> emissions and costs.

Novo Nordisk also aims to reduce CO<sub>2</sub> emissions from business flights and company cars. In 2015, business flights resulted in estimated CO<sub>2</sub> emissions of 74,000 tons, which is an increase of 9% compared with 2014. The estimated CO<sub>2</sub> emissions from leased company cars decreased by 7%, from 72,000 tons in 2014 to 67,000 tons in 2015.

## WASTE

In 2015, Novo Nordisk generated 34,715 tons of waste, which is an increase of 13% compared with 2014. This is mainly due to an increase in non-recyclable ethanol used in purification processes for insulin production. Reducing ethanol waste is a high priority for the company, and efficient regeneration plants enable the ethanol to be re-used many times.

## LONG-TERM ENVIRONMENTAL TARGETS

The long-term ambition is to decouple consumption of water and energy from sales growth. The current target is set as a maximum of half of the percentage increase in sales in local currencies, measured as a three-year average. In 2015, sales increased by 8% in local currencies while energy consumption increased by 9% and water consumption by 6%. The target is challenged by production expansion and lower sales growth rates.

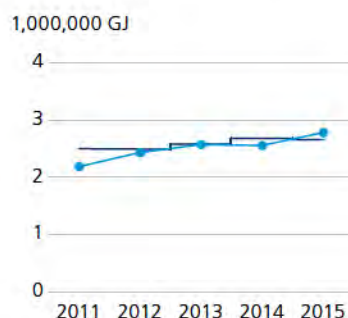
## NEW LONG-TERM TARGET FOR CO<sub>2</sub> EMISSIONS

Novo Nordisk has set a new long-term target to reduce CO<sub>2</sub> emissions. A key element of the strategy is increasing the share of renewable energy. In 2020, production sites worldwide will be 100% powered by renewable electricity. As part of the We Mean Business Coalition, Novo Nordisk has signed the RE100 initiative led by The Climate Group in partnership with CDP. This is a collaborative initiative of influential businesses committed to 100% renewable electricity that is working to increase corporate demand for renewable energy.

For additional information on environmental performance, see the environmental statement on [pp 102–104](#) and the UNGC Communication on Progress at [novonordisk.com/annualreport](http://novonordisk.com/annualreport).

### ENERGY CONSUMPTION

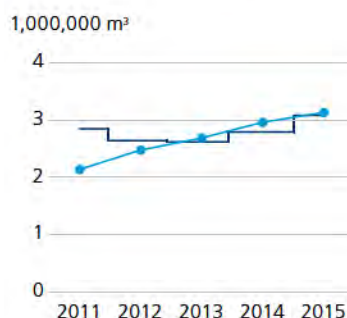
● Realised  
— Target (not to exceed)\*



\* From 2007 to 2011, the target was set as an accumulated reduction over four years from a 2007 baseline.

### WATER CONSUMPTION

● Realised  
— Target (not to exceed)\*



\* From 2007 to 2011, the target was set as an accumulated reduction over four years from a 2007 baseline.

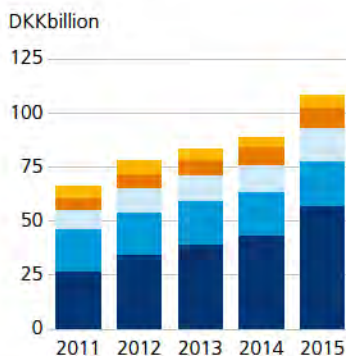
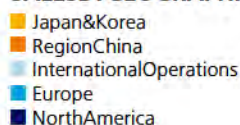


# PERFORMANCEHIGHLIGHTS

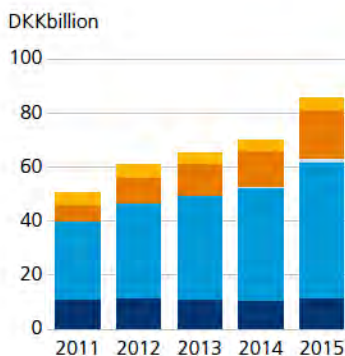
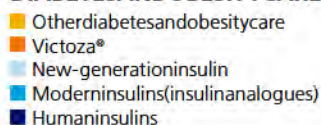
	2011	2012	2013	2014	2015	2014–2015	
<b>FINANCIALPERFORMANCE</b>							
Net sales	66,346	78,026	83,572	88,806	107,927	22%	Excl NNIT A/S <sup>2</sup>
Underlying sales growth in local currencies <sup>1</sup>	11.4%	11.6%	11.9%	8.3%	8.4%		
Currency effect (local currency impact)	(2.2%)	6.0%	(4.8%)	(2.0%)	13.1%		
Net sales growth as reported	9.2%	17.6%	7.1%	6.3%	21.5%		
Depreciation, amortisation and impairment losses	2,737	2,693	2,799	3,435	2,959	(14%)	
Operating profit	22,374	29,474	31,493	34,492	49,444	43%	36%
Net financials	(449)	(1,663)	1,046	(396)	(5,961)	N/A	
Profit before income taxes	21,925	27,811	32,539	34,096	43,483	28%	21%
Net profit for the year	17,097	21,432	25,184	26,481	34,860	32%	22%
Total assets	64,698	65,669	70,337	77,062	91,799	19%	
Equity	37,448	40,632	42,569	40,294	46,969	17%	
Capital expenditure, net	3,003	3,319	3,207	3,986	5,209	31%	
Free cash flow <sup>1</sup>	18,112	18,645	22,358	27,396	34,222	25%	17%
<b>FINANCIALRATIOS</b>							
Percentage of sales:							
Sales outside Denmark	99.3%	99.4%	99.4%	99.5%	99.7%		
Sales and distribution costs	28.6%	27.6%	28.0%	26.2%	26.2%		
Research and development costs	14.5%	14.0%	14.0%	15.5%	12.6%		
Administrative costs	4.9%	4.2%	4.2%	4.0%	3.6%		
Gross margin <sup>1</sup>	81.0%	82.7%	83.1%	83.6%	85.0%		
Net profit margin <sup>1</sup>	25.8%	27.5%	30.1%	29.8%	32.3%		
Effective tax rate <sup>1</sup>	22.0%	22.9%	22.6%	22.3%	19.8%		
Equity ratio <sup>1</sup>	57.9%	61.9%	60.5%	52.3%	51.2%		
Return on equity <sup>1</sup>	46.0%	54.9%	60.5%	63.9%	79.9%		
Cash to earnings <sup>1</sup>	105.9%	87.0%	88.8%	103.5%	98.2%		
Payout ratio <sup>1</sup>	45.3%	45.3%	47.1%	48.7%	46.6%		
Payout ratio adjusted for the partial divestment of NNIT A/S <sup>4</sup>	45.3%	45.3%	47.1%	48.7%	50.0%		
<b>LONG-TERMFİNANCIALTARGETS</b>							2015targets <sup>3</sup>
Operating profit growth	18.4%	31.7%	6.9%	9.5%	43.3%		15%
Operating profit growth in local currencies	22.1%	20.2%	14.6%	12.7%	20.6%		
Operating margin <sup>1</sup>	33.7%	37.8%	37.7%	38.8%	45.8%		40%
Operating profit after tax to net operating assets <sup>1</sup>	77.9%	99.0%	97.2%	101.0%	148.7%		125%
Cash to earnings (three-year average)	112.8%	103.7%	93.9%	93.1%	96.8%		90%

1. For definitions, please refer to p 94. 2. Adjusted for non-recurring income from the partial divestment of NNIT A/S of DKK 2,376 million and non-recurring proceeds in free cash flow of DKK 2,303 million. 3. The long-term financial targets were updated in February 2016. Please refer to '2016 Outlook' on p 8. 4. The net profit impact from the partial divestment of NNIT A/S was returned to Novo Nordisk's shareholders through a DKK 2.5 billion increase in the share repurchase programme announced in April 2015.

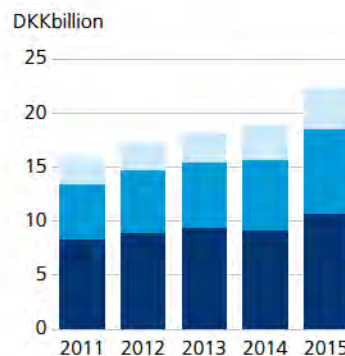
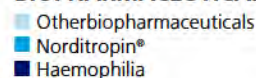
## SALESBYGEOGRAPHICREGION



## DIABETESANDOBESITYCARESALES



## BIOPHARMACEUTICALSSALES

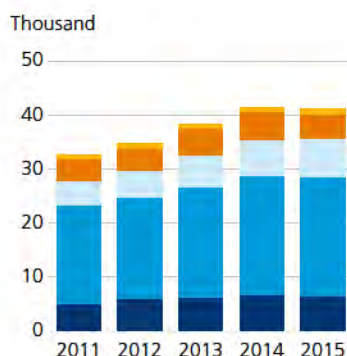




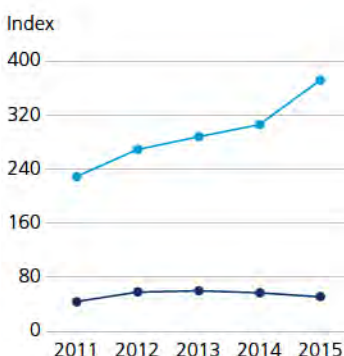
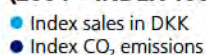
	2011	2012	2013	2014	2015	2014–2015
<b>SOCIAL PERFORMANCE</b>						<b>Change</b>
Least developed countries where Novo Nordisk sells insulin according to the differential pricing policy	36	35	35	32	23	(28%)
Donations (DKK million) <sup>5</sup>	81	84	83	84	97	15%
New patent families (first filings)	80	65	77	93	77	(17%)
Employees (total) <sup>6</sup>	32,632	34,731	38,436	41,450	41,122	(1%)
Employee turnover	9.8%	9.1%	8.1%	9.0%	9.2%	
Gender in Management (men/women)	63%/37%	61%/39%	61%/39%	60%/40%	59%/41%	
Relevant employees trained in business ethics	99%	99%	97%	98%	98%	
Product recalls	5	6	6	2	2	–
Failed inspections	0	1	0	0	0	–
Company reputation (scale 0–100)	N/A	N/A	82.97	80.8	82.4	
<b>LONG-TERM SOCIAL TARGETS</b>						<b>2015 targets</b>
Patients reached with Novo Nordisk diabetes care products (estimate in million)	20.9	22.8	24.3	24.4	26.8	40 by 2020
Working the Novo Nordisk Way (scale 1–5)	4.3	4.3	4.4	4.3	4.3	4.0
<b>ENVIRONMENTAL PERFORMANCE</b>						<b>Change</b>
Energy consumption (1,000 GJ)	2,187	2,433	2,572	2,556	2,778	9%
Water consumption (1,000 m <sup>3</sup> )	2,136	2,475	2,685	2,959	3,131	6%
CO <sub>2</sub> emissions from energy consumption (1,000 tons)	94	122	125	120	107	(11%)
Organic residues (tons)	71,685	99,209	110,228	110,095	124,049	13%
Waste (tons)	18,695	19,213	20,387	30,720	34,715	13%
<b>LONG-TERM ENVIRONMENTAL TARGETS</b>						<b>2015 targets</b>
Energy consumption (vs prior year)	(2%)	11%	6%	(1%)	9%	Not to exceed 4% <sup>8</sup>
Water consumption (vs prior year)	4%	16%	8%	10%	6%	Not to exceed 4% <sup>8</sup>
<b>SHARE PERFORMANCE</b>						<b>Change</b>
Basic earnings per share/ADR in DKK <sup>1,9</sup>	6.05	7.82	9.40	10.10	13.56	34%
Diluted earnings per share/ADR in DKK <sup>1,9</sup>	6.00	7.77	9.35	10.07	13.52	34%
Total number of shares (million), 31 December	2,900	2,800	2,750	2,650	2,600	(2%)
Treasury shares (million), 31 December	122	87	103	57	52	(9%)
Share capital (DKK million)	580	560	550	530	520	(2%)
Net asset value per share in DKK <sup>1,9</sup>	12.91	14.51	15.48	15.21	18.07	19%
Dividend per share in DKK <sup>9</sup>	2.80	3.60	4.50	5.00	6.40 <sup>10</sup>	28%
Total dividend (DKK million)	7,742	9,715	11,866	12,905	16,230 <sup>10</sup>	26%
Share repurchases (DKK million)	10,839	12,162	13,989	14,728	17,229	17%
Closing share price (DKK) <sup>9</sup>	132.00	183.30	198.80	260.30	399.90	54%

5. Donations to the World Diabetes Foundation and the Novo Nordisk Haemophilia Foundation, which are working to increase healthcare capacity in developing countries. 6. 2015 data exclude employees in NNIT A/S, which was divested in 2015 (approximately 2,400 employees in NNIT A/S in 2014; had these employees been included, the growth would have been 5%). 7. Data for people with diabetes and employees are not included due to lack of availability. 8. The 4% equals half of the business growth measured as the increase in sales in local currencies as a three-year average. For detailed target definition, please refer to p 13. 9. Share performance-related key figures have been calculated reflecting a trading unit of DKK 0.20. 10. Proposed dividends for the year (not yet declared).

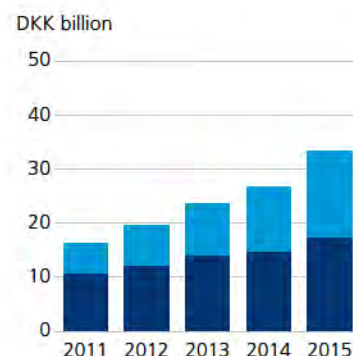
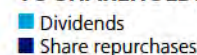
### EMPLOYEES (TOTAL)



### SALES AND CO<sub>2</sub> EMISSIONS (2004 = INDEX 100)



### NET CASH DISTRIBUTION TO SHAREHOLDERS

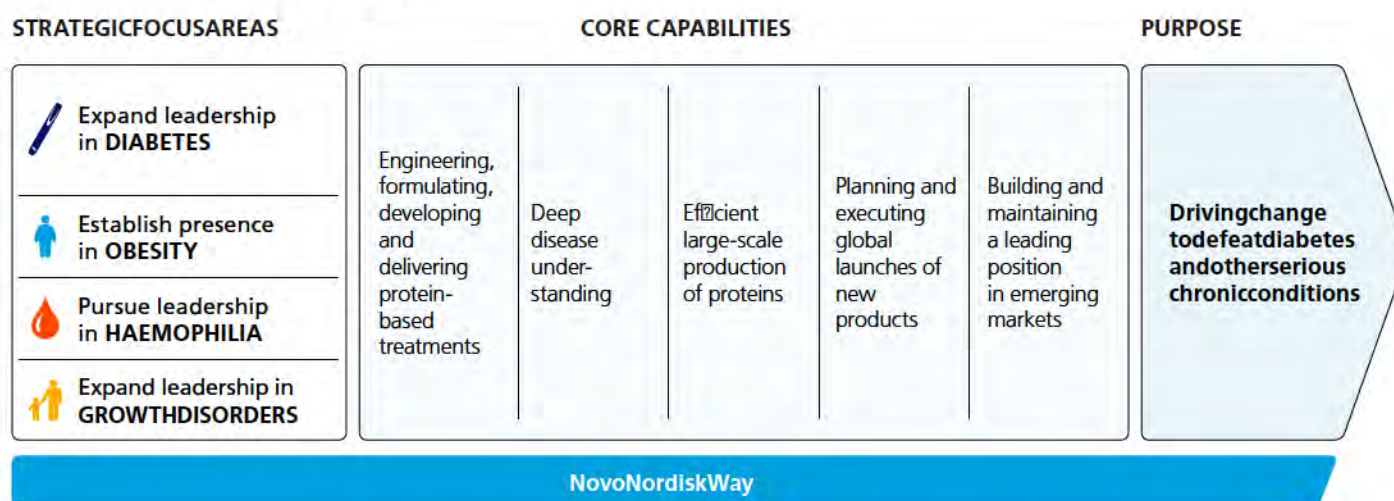




# OUR STRATEGY

The ingredients that make up Novo Nordisk's corporate strategy are a sharp focus on four therapeutic areas, five core capabilities and a clear purpose, all anchored in a values-based management system.

## NOVONORDISK'S STRATEGY



Since it was founded in Denmark more than 90 years ago, Novo Nordisk has been changing diabetes. This heritage has given the company experience and capabilities that also enable it to help people defeat other serious chronic conditions: haemophilia, growth disorders and obesity. Today, Novo Nordisk is a leading company within diabetes, haemophilia and

growth disorders, and is well on its way to building a presence within obesity.

This sharp focus on a few selected therapeutic areas is a key part of Novo Nordisk's corporate strategy. Another is the strong focus on the constant development of five core capabilities that Novo Nordisk has built

up over the years and continues to leverage in all four therapeutic areas. The final ingredient of the strategy is the values-based management system, the Novo Nordisk Way. All of which serves the purpose of driving change to defeat diabetes and other serious chronic conditions. Read more about the Novo Nordisk Way on [p 18](#).

## THE FOUR STRATEGIC PRIORITIES

### 1. EXPAND LEADERSHIP IN DIABETES

According to the International Diabetes Federation, 415 million people worldwide are living with diabetes, and it is predicted that by 2040 more than 10% of the world's adult population – 642 million people worldwide – will have diabetes.<sup>1</sup>

The global market for diabetes care products amounts to 353 billion Danish kroner, of which Novo Nordisk products account for approximately 27%. The market has grown by around 10% annually in the last decade, and all indications are that it will continue to

grow as a result of the increasing number of people with diabetes and the need for better treatments. Of this global market, insulin accounts for 56%, oral diabetes products (tablet-based medications) account for 37% and GLP-1 products account for 7%, measured in value.

Diabetes care is by far Novo Nordisk's largest business area, accounting for 79% of the company's total sales. In 2007, the company decided to focus all its efforts in diabetes care on protein-based products, such as insulin and GLP-1. As a result, today Novo Nordisk is the leader in both segments, with market shares of 40% and 75% respectively, measured in value.

Novo Nordisk's ambition is to further expand its leadership within the insulin and GLP-1 segments. Key to achieving this ambition are the new generation of insulin products, Tresiba®, Xultophy® and Ryzodeg®, and the once-daily GLP-1 analogue Victoza®, all of which have been or will be launched in convenient injection devices, such as FlexTouch®. Significant projects in the research and development pipeline include a new faster-acting formulation of insulin aspart, a once-weekly injectable GLP-1 analogue semaglutide and a once-daily tablet version of semaglutide.



Innovative biological medicines such as these are Novo Nordisk's key contribution to defeating diabetes. However, the company is well aware that its products only do part of the job: it takes more than medicine to change diabetes. That is why Novo Nordisk, with Changing Diabetes®, is engaged in other activities aimed at creating awareness of type 2 diabetes and promoting healthy lifestyles and societal changes that are needed to curb the alarming rise in new cases of the disease. A recent example is Cities Changing Diabetes, a global initiative to tackle diabetes in the world's big cities. Read more about:

Novo Nordisk's pipeline of products in development, [p 20](#)  
GLP-1 products, [p 26](#)  
The challenge of fighting diabetes, [p 22](#)  
Cities Changing Diabetes, [p 30](#).



## 2. ESTABLISH A PRESENCE IN OBESITY

Obesity is known to be a major risk factor in developing serious diseases such as type 2 diabetes and, as such, is a natural therapeutic area for Novo Nordisk to enter. Obesity has reached pandemic proportions, with more than 600 million adults having clinical obesity (defined as having a Body Mass Index of 30 or above).<sup>2</sup> However, currently there are few pharmaceutical treatment options available to treat obesity, and reimbursement for these medications is limited. The global pharmaceutical market for obesity products currently amounts to around 10 billion kroner.

In 2015, Novo Nordisk entered the obesity market with Saxenda® (liraglutide 3 mg), which was launched in the US in April and is now also available in Denmark and Canada. Novo Nordisk's ambition is to build a long-term presence in the obesity market, and Saxenda® is seen as the first of several steps towards achieving this. Read more about Novo Nordisk's obesity strategy on [p 28](#).



## 3. PURSUE LEADERSHIP IN HAEMOPHILIA

Haemophilia is an inherited or acquired bleeding disorder that prevents blood from clotting. An estimated 420,000 people worldwide are living with severe or moderate haemophilia.<sup>3</sup> The global haemophilia pharmaceutical market has a value of around 75 billion kroner and has grown by around 5% annually in recent years.<sup>5</sup>

Novo Nordisk entered the haemophilia market in 1996 with NovoSeven® for the treatment of people with haemophilia who form antibodies against traditional treatments.

The launch of NovoEight® in 2014 was a significant milestone in the company's ambition to move from this niche into the main haemophilia A market. In January 2016, Novo Nordisk filed for regulatory approval of long-acting factor IX in the EU for the treatment of haemophilia B. Furthermore, the company has a long-acting clotting factor in phase 3 development for haemophilia A. Novo Nordisk's ambition is to achieve a leadership position within both haemophilia A and haemophilia B. Read more about Novo Nordisk's activities within haemophilia on [p 32](#).



## 4. EXPAND LEADERSHIP IN GROWTH DISORDERS

Novo Nordisk has been active in the treatment of growth hormone deficiency for almost four decades. The global market for growth disorder treatments is estimated to be 16 billion kroner. Novo Nordisk's growth hormone, Norditropin®, is the global market leader, with a market share of 35% measured by value. The company's ambition is to expand its leadership in the growth hormone market. A key project in this respect is Novo Nordisk's long-acting growth hormone product which is in phase 3 development.

### ENGINEERING, FORMULATING, DEVELOPING AND DELIVERING PROTEIN-BASED TREATMENTS

#### 1920

- Nordisk Insulinlaboratorium (1923) and Novo Terapeutisk Laboratorium (1925) founded.

#### 1940

- Nordisk develops isophane insulin (NPH), a neutral insulin with prolonged action.

#### 1980

- NovoPen® is launched – an injection system similar in appearance to a fountain pen.
- Novo starts production of human insulin with the help of genetically engineered yeast cells.
- Nordisk markets Norditropin® – genetically engineered human growth hormone.

#### 1990

- NovoSeven® is launched – for the treatment of haemophilia patients with inhibitor reaction.
- NovoRapid® – the company's first modern insulin – is marketed.

#### 2000

- Victoza® – a human GLP-1 analogue for once-daily treatment of type 2 diabetes – is launched.

#### 2010

- Tresiba® – the company's first new-generation insulin – is launched.

## FIVE CORE CAPABILITIES

Novo Nordisk's core capabilities have been developed and refined over many years.

### ENGINEERING, FORMULATING, DEVELOPING AND DELIVERING PROTEIN-BASED TREATMENTS

Novo Nordisk's researchers are among the world's best within protein engineering, formulation technology, expression and delivery, enabling the company to continuously improve the properties of therapeutic proteins such as insulin and GLP-1 and the injection devices needed. Recently, Novo Nordisk has built new capabilities in formulating protein-based products into tablets.

### DEEP DISEASE UNDERSTANDING

Striving for decades to meet the medical needs of people with diabetes has given Novo Nordisk a deep understanding of what it is like to live with this condition. Together with strong relationships and collaborations with external researchers and clinicians, this understanding provides a solid foundation for the company's research, development and marketing activities.

### EFFICIENT LARGE-SCALE PRODUCTION OF PROTEINS

A high-quality, cost-effective global manufacturing infrastructure is a prerequisite for competing successfully in an increasingly competitive pharmaceutical market. Novo Nordisk is the world's largest producer of insulin and has been developing its expertise in the production of protein-based pharmaceuticals since 1923. Read more about new investments in production on [p 38](#).

### PLANNING AND EXECUTING GLOBAL LAUNCHES OF NEW PRODUCTS

Due to the high and increasing costs associated with developing and launching new medicines, most products are launched globally over a relatively short period to ensure a reasonable time before patent expiration. Through the global launch of Victoza®, Novo Nordisk has refined this capability, which is now being used for the launch of new products, such as Tresiba® and NovoEight®.

### BUILDING AND MAINTAINING A LEADING POSITION IN EMERGING MARKETS

Many years of experience have helped Novo Nordisk understand the needs of emerging markets as their healthcare systems develop. The company's strategy has always been to establish a local organisation early and to grow organically as the market develops. This has enabled Novo Nordisk to build a highly skilled sales force, long-term relationships and a sustainable market presence in emerging markets.



# NOVO NORDISK WAY

Through its approach to business, Novo Nordisk aims to create shared value with its stakeholders.

Novo Nordisk's values-based management system, the Novo Nordisk Way, is a key ingredient in the company's corporate strategy. "It describes who we are, where we want to go and the values that characterise our company," explains President and Chief Executive Officer (CEO) Lars Rebien Sørensen.

He argues that it is an effective means of governing a fast-growing global organisation such as Novo Nordisk: "There's no way we could have a written rule for everything we do in this company. In many cases we have to rely on our people making the right decisions, and this is why the Novo Nordisk Way is so important. It applies to and sets the direction for all employees at Novo Nordisk – no matter what they do or where they work. It's a promise we make to each other and to our external stakeholders."

Lars Rebien Sørensen mentions some of the ways the company ensures that the Novo Nordisk Way becomes part of every employee, from traditional means such as employee induction programmes and leadership training to a unique feature called 'facilitations'. A group of senior employees have been appointed facilitators and they travel the global organisation to interview employees, managers and internal stakeholders of the organisational units they are facilitating, while also looking into documents and local business practices. Ultimately, this forms the basis for an assessment of the degree to which each particular unit is operating in accordance with the Novo Nordisk Way.

In 1923, our Danish founders began a journey to change diabetes. Today, we are thousands of employees across the world with the passion, the skills and the commitment to continue this journey to prevent, treat and ultimately cure diabetes.

- Our ambition is to strengthen our leadership in diabetes.
- We aspire to change possibilities in haemophilia and other serious chronic conditions where we can make a difference.
- Our key contribution is to discover and develop innovative biological medicines and make them accessible to patients throughout the world.
- Growing our business and delivering competitive financial results is what allows us to help patients live better lives, offer an attractive return to our shareholders and contribute to our communities.
- We never compromise on quality and business ethics.
- Our business philosophy is one of balancing financial, social and environmental considerations – we call it the Triple Bottom Line.
- We are open and honest, ambitious and accountable, and treat everyone with respect.
- We offer opportunities for our people to realise their potential.

Every day we must make difficult choices, always keeping in mind what is best for patients, our employees and our shareholders in the long run.

It's the Novo Nordisk Way.





The end product is a report evaluating the unit's performance against the Novo Nordisk Way and an action plan agreed with local management for how to do even better. Just as the facilitators can identify areas for improvement, they also identify best practices which can be shared throughout the company. Both Executive Management and the Board of Directors regularly receive reports on how well the organisation is living up to the Novo Nordisk Way.

#### THE TRIPLE BOTTOM LINE

A key element of the Novo Nordisk Way is the Triple Bottom Line business principle, which was written into the company's Articles of

their potential. When we provide affordable medicines in the world's poorest countries, we strengthen our business and reputation. And when we contribute to our communities, we earn stakeholder trust," he adds.

#### CREATING SHARED VALUE

Lars Rebien Sørensen is a firm believer that Novo Nordisk's long-term success depends on its ability to create both economic and societal development: "If we're not seen as creating value for the local communities in which we have a presence and the countries in which we do business, we will not be successful in the long run."

Contributions to communities are often measured in economic terms, such as job creation and tax payments. Novo Nordisk pays taxes in all jurisdictions where the company is present. It has a policy to 'pursue a competitive tax level in a responsible way', reflecting a continued focus on value creation without compromising business ethics. To manage uncertainties regarding tax payments, multi-year agreements, known as Advance Pricing Agreements, are negotiated in key jurisdictions and fully disclosed to tax authorities.

But there are more ways to generate value beyond commercial transactions. Often referred to as creating shared value, companies can earn returns in a sustainable way by developing solutions for the benefit of society. One example is in Kalundborg, Denmark, where Novo Nordisk's largest production site is located. Here, the company works with local stakeholders to promote sustainable development in the municipality. Its aim is to ensure that Kalundborg will develop into an even more attractive place to live and work, and a place where businesses will flourish.

Novo Nordisk's initiatives at country level aim to create value for society on a larger scale, for example by building capabilities in the healthcare system and improving access to healthcare. When successful, this strengthens the company's stakeholder relations, reputation and ultimately its chances of business success in that country.

An example of this philosophy in action can be seen in Algeria, one of Novo Nordisk's fastest-growing markets, where the company has had a successful partnership with the Ministry of Health for many years. Outcomes from this partnership include a Changing Diabetes® mobile clinic, which improves the competences of local healthcare professionals, and access to diabetes screening and care for underserved populations, and the Algerian Changing Diabetes® Barometer, which measures progress in the fight against diabetes.

#### DRIVING CHANGE ON A GLOBAL SCALE

Novo Nordisk proactively engages in dialogue on sustainable development with relevant partners worldwide. Since the Rio+20 Conference in 2012, the company has participated in the process leading up to the approval of the United Nations Sustainable Development Goals (SDGs), or, as they are often referred to, the Global Goals for Sustainable Development.

"The Global Goals are important for Novo Nordisk, not least because non-communicable diseases including diabetes are explicitly mentioned in the goal to provide 'health and well-being for all, of all ages,'" says Lars Rebien Sørensen. "The Global Goals give us a platform from which we can engage local, national and international stakeholders in discussions on diabetes and sustainable development, but also on many other topics on our agenda."

# NOVO NORDISK WAY

Association at the Annual General Meeting in 2004. It states that Novo Nordisk "strives to conduct its activities in a financially, environmentally and socially responsible way".

The Triple Bottom Line business principle frames Novo Nordisk's long-term strategy to be a sustainable business. It obliges everyone in the company to always consider how decisions and actions may affect people, communities and the environment. The aim is to ensure long-term profitability by reducing risks related to business activities and to enhance the positive contributions to society from Novo Nordisk's global operations.

Lars Rebien Sørensen underlines that the Triple Bottom Line principle is about maximising the value of the company in the long term. "Because," as he said in a recent interview with *Harvard Business Review*, "in the long term, social and environmental issues become financial issues. There's really no hocus pocus about this. And Novo Nordisk is part-owned by a Danish foundation that obliges us to maximise the value of the company for the long term."

"When we convert to renewable energy, we reduce costs. When we provide a safe workplace and challenges for each individual, employees can realise



# PIPELINE OVERVIEW

## DIABETES AND OBESITY CARE

Compound	Indication	Description	Phase 1	Phase 2	Phase 3	Filed/ regulatory approval
<b>Diabetes</b>						
<b>Xultophy®</b> NN9068	Type 2 diabetes	A combination of insulin degludec and liraglutide in a once-daily single injection. Approved in Europe.				
<b>Faster-acting insulin aspart</b> NN1218	Type 1 and 2 diabetes	A new formulation of insulin aspart intended to accelerate onset of action, with the potential for increased flexibility of dosing.				
<b>Semaglutide</b> NN9535	Type 2 diabetes	A once-weekly GLP-1 analogue intended to offer the clinical benefits of a GLP-1 analogue with less frequent injections to people with type 2 diabetes.				
<b>OG2175C</b> NN9924	Type 2 diabetes	A long-acting oral GLP-1 analogue intended as a once-daily tablet treatment for people with type 2 diabetes.				
<b>OI338GT</b> NN1953	Type 1 and 2 diabetes	A long-acting basal insulin analogue intended to offer the clinical benefits of a basal insulin analogue in a once-daily tablet.				
<b>Anti-IL-21 T1D</b> NN9828	Type 1 diabetes	Intended as a beta-cell preservation treatment for people who are newly diagnosed with type 1 diabetes.				
<b>Dual-agonist</b> NN9709	Type 2 diabetes	A GLP-1/GIP dual-agonist intended as a once-daily treatment for people with type 2 diabetes.				
<b>LAI287</b> NN1436	Type 1 and 2 diabetes	A long-acting basal insulin analogue intended for once-weekly dosing.				
<b>Mealttime</b> NN1406	Type 1 and 2 diabetes	A liver-preferential mealtime insulin analogue.				
<b>OI320GT</b> NN1957	Type 2 diabetes	A long-acting basal insulin in an oral formulation intended as a once-daily tablet treatment.				
<b>PYY 1562</b> NN9748	Type 2 diabetes	An appetite-regulating hormone, peptide tyrosine, for the treatment of diabetes.				

### Phase 1



Studies in a small group (usually 10–100) of healthy volunteers, and sometimes patients, to investigate how the body handles, distributes and eliminates new medication and establish the maximum tolerated dose.

### Phase 2



Studies in large groups of patients (usually 1,000–3,000) comparing a new medication with a commonly used drug or placebo for both safety and efficacy. Phase 3a covers trials conducted after efficacy is demonstrated and prior to regulatory submission. Phase 3b covers clinical trials completed during and after regulatory submission. In small therapeutic areas such as haemophilia, regulatory guidelines may allow the design of single-arm therapeutic confirmatory trials or trials that compare against historical control, for example, instead of existing treatment or placebo.

### Phase 3




















Studies of various dose levels in a larger group of patients (usually 100–1,000) to learn about the new medication's effect on the condition and its side effects. In phase 2, clinical trials are carried out to evaluate efficacy (and safety) in specified populations of patients. The outcome of phase 2 trials is clinical proof of concept and the selection of dose for evaluation in phase 3 trials.

### Filed/regulatory approval





















The phase in which a product undergoes regulatory authority review. Products listed under this phase are currently under regulatory review in at least one of the triad markets: the US, the EU and Japan.



Compound	Indication	Description	Phase 1	Phase 2	Phase 3	Filed/ regulatory approval
 <b>Obesity</b>						
<b>Semaglutide</b> NN9536	Obesity	A long-acting GLP-1 analogue intended as a once-daily treatment for obesity.				
<b>AM833</b> NN9838	Obesity	A novel amylin analogue intended as a once-weekly treatment for obesity.				
<b>G530L</b> NN9030	Obesity	A novel glucagon analogue which, in combination with liraglutide, is intended for the treatment of obesity.				
<b>PYY 1562</b> NN9747	Obesity	An appetite-regulating hormone, peptide tyrosine, which, alone or in combination with semaglutide, is intended for the treatment of obesity.				

## BIOPHARMACEUTICALS

 <b>Haemophilia</b>						
<b>N9-GP</b> NN7999	Haemophilia B	A glycopegylated long-acting recombinant coagulation factor IX intended to offer prophylaxis and treatment of bleeds.				
<b>N8-GP</b> NN7088	Haemophilia A	A glycopegylated long-acting recombinant coagulation factor VIII intended to offer prophylaxis and treatment of bleeds.				
<b>Concizumab</b> NN7415	Haemophilia A and B	A monoclonal antibody against Tissue Factor Pathway Inhibitor (TFPI) intended for bleeding prevention after subcutaneous administration.				
 <b>Growth disorders</b>						
<b>Somapacitan</b> NN8640	Growth disorders	A long-acting human growth hormone intended to offer once-weekly injections.				

Read more at [novonordisk.com/investors](http://novonordisk.com/investors) and [clinicaltrials.gov](http://clinicaltrials.gov).

## 2016 KEY MILESTONES

<b>Tresiba®</b>	SWITCH and DEVOTE results
<b>Victoza®</b>	LEADER results
<b>Semaglutide</b>	Phase 3a completion
<b>Oral semaglutide</b>	Phase 3a initiation
<b>Xultophy®</b>	Expected feedback from regulatory filing in the US
<b>Faster-acting insulin aspart</b>	Expected feedback from regulatory filing in the US
<b>N9-GP</b>	Regulatory filing in the US



# 193 MILLION PEOPLE DO NOT KNOW THEY HAVE DIABETES ARE YOU ONE OF THEM?

Early diagnosis and optimal control of blood sugar are key to avoiding long-term complications from diabetes.

The International Diabetes Federation (IDF) estimates that, of the 415 million people in the world living with diabetes, almost half have not been diagnosed.<sup>1</sup> This means that approximately 193 million people are going about their everyday lives not realising the damage that is being done to their bodies: the longer it takes to diagnose diabetes, the more likely it is that complications will have arisen – including damage to the eyes, kidneys, nerves and heart. Furthermore, people with undiagnosed diabetes are at significantly higher risk of stroke and cardiovascular disease.

Alarming, the UK Prospective Diabetes Study (UKPDS) found that complications were already present in up to 50% of people at the time of diabetes diagnosis.<sup>6</sup> With almost 642 million people estimated to be living with diabetes by 2040<sup>1</sup>, the number of people who remain undiagnosed is a major cause for concern.

"Traditionally, people only go to the doctor when they have a problem – which means that by the time they're diagnosed with diabetes a lot of damage has already been done, as someone can have diabetes for a long time before they experience any symptoms from complications," explains Professor Stephen Gough, senior principal clinical scientist at Novo Nordisk and former head of department at the Oxford Centre for Diabetes Endocrinology & Metabolism (OCDEM). "If we are to reduce the burden of diabetes, we must diagnose people earlier – timing is crucial."

## RISK-BASED SCREENING

The diabetes 'Rule of Halves' illustrates that only half of the many millions of people with diabetes have been diagnosed (see graphic). The first – and perhaps the most crucial – step to breaking this rule is therefore to ensure that people with diabetes are diagnosed earlier.

President of the IDF, Dr Shaukat Sadikot, stresses how important it is that diagnosis rates are increased: "Widescreening would enable us to catch diabetes at an earlier stage of progression when it's easier to manage and treat well with less intensive therapy. But unfortunately the reality is that universal screening is not possible, because of population size and the costs involved."

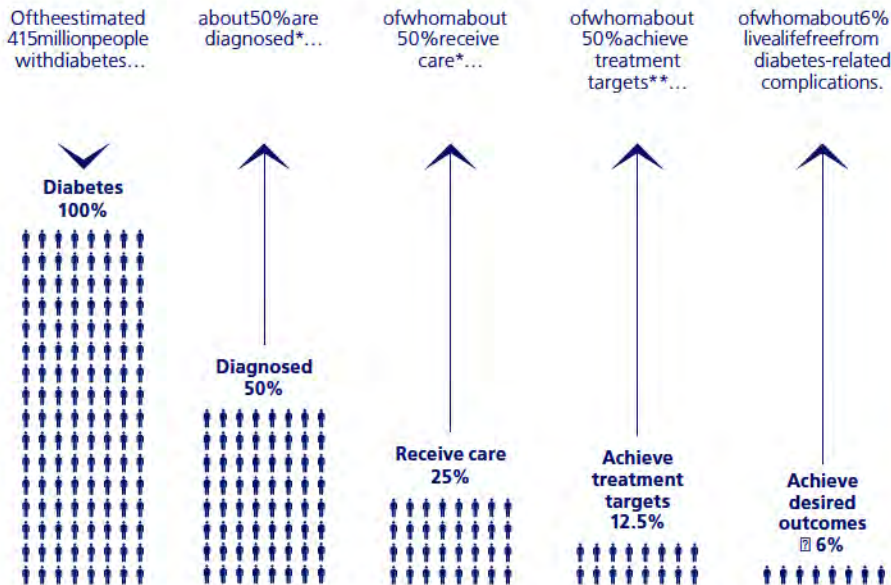
However, there are a number of well-known risk factors associated with developing type 2 diabetes (see box), and screening only those people who have one or more of these risk factors would, in many countries, be a manageable task.

"Screening people who are at high risk of having diabetes, before they exhibit any symptoms, would have a major impact on



## THE 'RULE OF HALVES'

ACCORDING TO THE RULE OF HALVES <sup>7</sup>, ONLY AROUND 6% OF PEOPLE WITH DIABETES LIVE A LIFE FREE FROM DIABETES-RELATED COMPLICATIONS.\*



\*Actual rates of diagnosis, treatment, targets and outcomes vary in different countries. \*\*That is, recommended glucose levels.

health outcomes," points out Dr Sadikot. "Not only would we be able to catch people at an early stage of diabetes who would respond well to routine management, we would also be able to help people who are borderline for diabetes—those with impaired glucose tolerance, for example—and help them to delay the onset of diabetes through lifestyle changes."

With Changing Diabetes <sup>®</sup> (see box), Novo Nordisk is promoting earlier diagnosis of diabetes through risk-based screening programmes, so that the risk of diabetes complications is reduced and people with diabetes are able to live their lives with as few limitations as possible.

### OPTIMAL CARE

However, even when diagnosed with diabetes, the Rule of Halves highlights that only about 12.5% of people receive the appropriate therapy to achieve their treatment targets. This means that very few can live their lives free from complications.

Professor Stephen Gough explains that the problem is that people with diabetes are often prescribed the simplest treatment, or a treatment that is not intensive enough to enable the optimal target to be reached for the disease stage. "The next step in treatment is then not taken until blood glucose levels increase to an unacceptable level," he says.

"In an ideal world, optimal control of diabetes is keeping blood glucose, lipid profiles and blood pressure the same as in someone without diabetes. This requires that treatment is initiated earlier and op

timised continuously. Many people, however, may stop taking their medicine, because such tight control can lead to an increase in hypoglycaemic attacks and weight gain," he continues. "This is where the new advanced and better-tolerated treatments come in. They have been designed to minimise some of the unwanted effects of optimal control and are therefore easier for people to use to reach and maintain their targets."

### THE BURDEN OF DIABETES

The diabetes pandemic is a severe burden on people and society. According to the IDF, diabetes was a factor in 5 million deaths and accounted for 673 billion US dollars in health expenditure, or 11.6% of the total healthcare spend worldwide, in 2015. <sup>1</sup> Added to this is the impact of reduced employment and productivity, which together put a significant economic burden on people living with diabetes, their families and society. Evidence shows that early detection, even before symptoms are evident, and optimal control of diabetes lead to fewer and less serious complications, and increased life expectancy.

Studies supporting the cost-effectiveness of screening and optimising treatment have proven that, while short-term costs of treatment and management may increase, long-term costs for healthcare systems will substantially decrease. <sup>9,10,11</sup> Furthermore, evidence suggests that, in the long term, the society gain will be three times the initial investment costs of optimising treatment. <sup>12</sup> Enhanced treatment is therefore not only cost-effective; it may also be cost-saving—and, ultimately, life-saving.

## RISK FACTORS FOR TYPE 2 DIABETES<sup>8</sup>

Risk factors for type 2 diabetes include:

- Family history of diabetes
- Overweight
- Unhealthy diet
- Physical inactivity
- Increasing age
- High blood pressure
- Ethnicity
- Impaired glucose tolerance
- History of gestational diabetes
- Poor nutrition during pregnancy

## CHANGING DIABETES<sup>®</sup>

Changing Diabetes <sup>®</sup> is Novo Nordisk's response to the global diabetes challenge. The company's key contribution is to discover and develop better biological medicines, but more is needed to help people defeat diabetes—to live a life with as few limitations as possible. Changing Diabetes <sup>®</sup> addresses the biggest unmet needs and focuses on three priorities: more people with diabetes must be diagnosed earlier, more people with diabetes must achieve optimal control, and diabetes must be on the agenda of those managing cities, where two out of three people with diabetes live today. Read more on p. 30. For more information, visit [novonordisk.com/about-novo-nordisk/changing-diabetes](http://novonordisk.com/about-novo-nordisk/changing-diabetes).

## POTENTIAL COMPLICATIONS OF UNCONTROLLED DIABETES



### STROKE

Strokes are up to four times as likely



### BLINDNESS

Diabetes is a leading cause of blindness



### HEART ATTACK

Heart attack is three times as likely and heart disease is up to four times as likely



### KIDNEY FAILURE

Total kidney failure is three times as likely



### AMPUTATION

Diabetes is a leading cause of non-traumatic lower-limb amputations







"At Novo Nordisk, it's our fundamental belief that the future of diabetes treatment is not simply 'more of the same' – it's something new, innovative and exciting."

**PETER KURTZHALS**  
HEAD OF GLOBAL RESEARCH



## Researchers at Novo Nordisk are working on new protein-based medicines which hold great promise for diabetes treatment.

Treatment options for diabetes have come a long way since insulin was first used in 1922, but the ultimate goal of conveniently achieving normal blood glucose levels – with, for example, no risk of hypoglycaemia or weight gain – has still not been reached.

"The reality is that we're not there yet – there are still challenges to overcome with current diabetes therapy," explains Peter Kurtzhals, senior vice president and head of Global Research at Novo Nordisk. "This is why we have hundreds of world-class scientists, based in our cutting-edge research facilities in Denmark, the US and China, doing what we do best: finding new and better protein-based therapeutics. This is a very exciting time as we have so many promising leads for new innovative diabetes medicines."

### INSULIN: THE ULTIMATE TREATMENT

While insulin remains the ultimate therapy for many people with diabetes today, much more can be done to improve insulin treatment with regard to both efficacy and convenience – and who knows better than people with diabetes? Tanner Barton, an American student-athlete who has type 1 diabetes, was part of a Novo Nordisk patient workshop in Seattle in 2015, where he

shared his views and wishes with Novo Nordisk researchers. "I think it's incredibly beneficial for people with diabetes to be engaged with pharmaceutical companies, so that treatments address not just the physical burden, but also the psychosocial burden of this disease. I believe there are many exciting medicines on the horizon, but it's important they hone in on the accuracy of treatments so that the anxiety of regulating blood sugar levels is eliminated," he says. "I want to be able to compete in a swim meet and not worry about my blood sugar."

Within the field of insulin therapy, Novo Nordisk is developing a faster-acting insulin and once-weekly long-acting insulins, with the aim of meeting the needs of people living with diabetes.

Although a once-weekly injection of insulin will appeal to many people with diabetes, some may still prefer to forego injections entirely – which is why Novo Nordisk started working on the development of insulin in tablet form a few years ago. But this is no easy task, as Peter Kurtzhals explains: "Oral insulin, as we call it, is a huge challenge, as we have to figure out a way to protect the insulin molecule so that it isn't digested in the gut, then find a way for this large protein molecule to pass into the bloodstream in the correct quantities and for it to remain in the blood for the right amount of time. But we have high aspirations and are excited about having brought an oral insulin compound into phase 2 development."

To further its knowledge and expertise in the field of protein delivery devices, Novo Nordisk recently announced a three-year research collaboration with the Langer Laboratory at Massachusetts Institute of Technology, which Peter Kurtzhals has great hopes for: "Professor Robert Langer and his team have a phenomenal track record of being innovative at the interface of bio pharmaceuticals and technology. They are world-leading experts in creating new approaches for delivering peptides and proteins across complex barriers in the body, such as the intestine. This collaboration highlights our commitment to oral treatment options, and we're already researching the next generation of oral insulin." This partnership is yet another example of a research

collaboration agreement with a high-profile academic institution that Novo Nordisk has recently entered into; other examples include Oxford University and the Karolinska Institute in Stockholm, where several joint post-doc programmes are now in place. "Collaborations between academia and industry will be increasingly important to translate new discoveries into medicines for people with diabetes," says Peter Kurtzhals.

### THE POTENTIAL OF GLP-1

Novo Nordisk is also continuing its research into GLP-1 (glucagon-like peptide-1), a class of medicine which has substantial innovation potential (see p. 26). The company has a once-weekly GLP-1 analogue semaglutide in phase 3 and will soon take it on to daily oral GLP-1 into phase 3 development. Moreover, it is researching next-generation GLP-1 products as well as new combinations with insulin to improve treatment outcomes.

To further expand the company's portfolio of projects, Novo Nordisk recently announced its acquisition of a research portfolio from two biotech companies based in the US. "These companies are a great addition to our competences, particularly in protein chemistry, and will further strengthen our pipeline, not least within GLP-1 and insulin research," Peter Kurtzhals says.

### FINDING A CURE

No matter the advances in diabetes treatment options, the biggest wish for people with diabetes is still for a cure to be found.

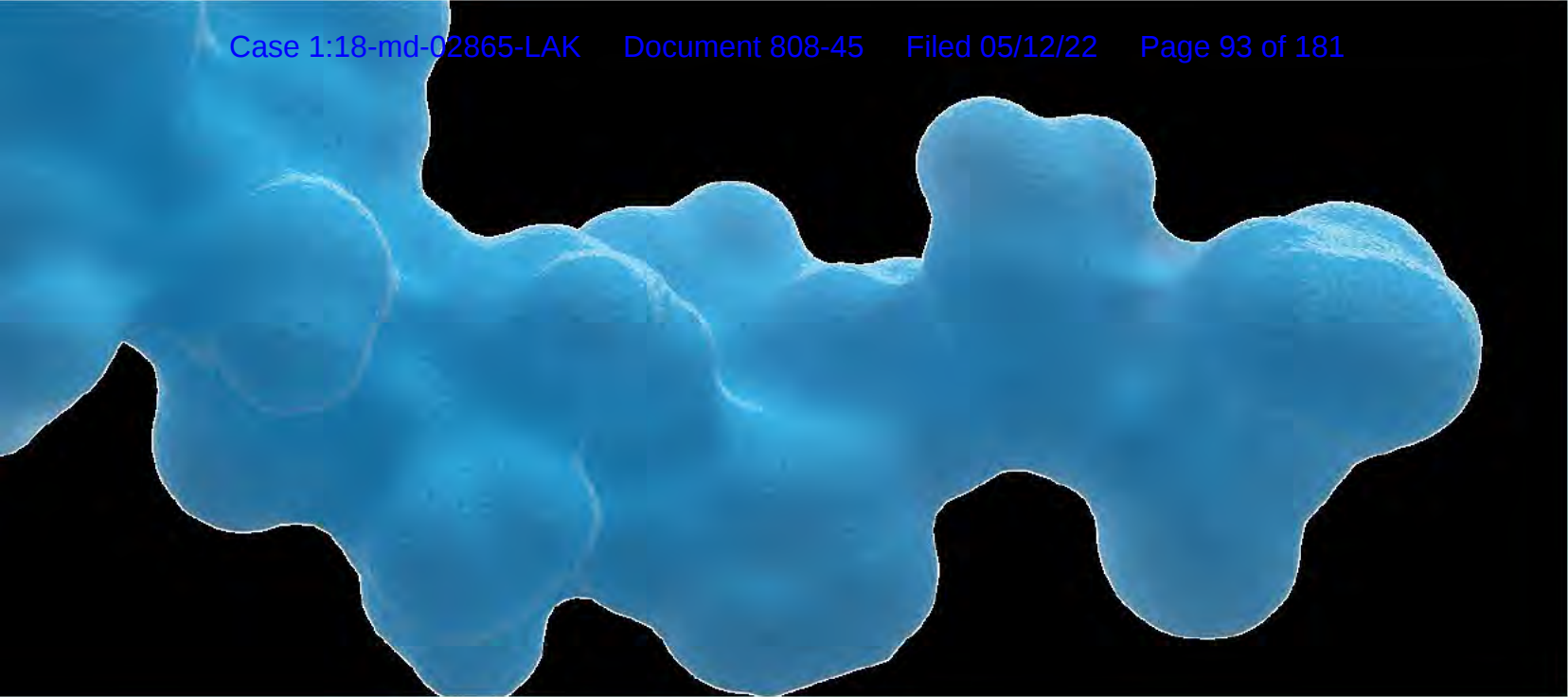
"Because I'm such a passionate type 1 diabetes advocate, I've participated in some amazing outreach opportunities, but don't get me wrong – I absolutely want a cure!" emphasises Tanner Barton. "And I think the potential for finding a cure in my lifetime is within reach, if the great minds in this world come together and work as one."

Novo Nordisk is committed to finding a cure, and the company is continuing its stem cell research in this area. "We're getting closer than ever to this goal, but we don't want to raise expectations. It's an extremely difficult task and we're investing for the very long term," stresses Peter Kurtzhals.

A powerful intervention, although not a cure per se, is also being investigated by Novo Nordisk in the form of a compound that may conserve beta cell function – and thereby prevent the progression of type 1 diabetes.

"At Novo Nordisk, it's our fundamental belief that the future of diabetes treatment is not simply 'more of the same' – it's something new, innovative and exciting. We stand by our aspiration and belief that we can continue doing better than what's on offer now. With each step, we're getting closer to the summit and to helping people with diabetes live a life with as few limitations as possible," Peter Kurtzhals concludes.





# GLP-1

## SMALL PROTEIN, BIG POTENTIAL

Glucagon-like peptide-1 (GLP-1) analogues are a relatively new therapy for diabetes—but Novo Nordisk has been researching them for almost a quarter of a century. “GLP-1 is an extremely exciting peptide,” Executive Vice President and Chief Science Officer Mads Krosgaard Thomsen explains. (Peptide is the scientific term for a small protein.) “We’ve known about its significant role in metabolism for some time, but only recently have we come to understand some other roles it plays in the human body. This is opening up new avenues of research for us.”

Today, Novo Nordisk is the market leader in the GLP-1 segment for the treatment of type 2 diabetes. Its compound is liraglutide, a GLP-1 analogue marketed under the brand name Victoza® and delivered as a daily injection. In 2015, the company launched a higher-dose version of liraglutide under the brand name Saxenda® for the treatment of obesity. But what excites Mads Krosgaard Thomsen most is the pipeline of potential GLP-1 analogue therapies that his people are working on and which are aimed at diabetes and obesity as well as other indications.

### A POWERFUL LITTLE PROTEIN

Lotte Bjerre Knudsen, scientific vice president within Global Research, has been a driving force in Novo Nordisk’s GLP-1 research since the company first became interested in this peptide. “What makes GLP-1 so powerful is that it does several things at the same time—including

lowering blood glucose levels with little risk of hypoglycaemia and reducing appetite, which may lead to weight loss,” she says.

However, the hormone in its natural state is not a suitable drug candidate. “GLP-1 has a half-life of less than two minutes in the blood and therefore can’t be used as a medical therapy in its natural form, so we needed to use our protein engineering expertise to create a modified version—an analogue—that will work for 24 hours. We’ve achieved this by attaching a natural fatty acid to the GLP-1 peptide that inhibits the elimination of GLP-1. The molecule was named liraglutide. We first synthesised it in 1997 and were all very proud when it entered clinical trials,” explains Lotte Bjerre Knudsen.

### PIONEERING THERAPY

Liraglutide, which is 97% similar to the naturally occurring human GLP-1, went on to be launched in 2009 for people with type 2 diabetes and was the first once-daily GLP-1 treatment on the market. “I didn’t think of the potential market when we began working on GLP-1; I just knew this molecule had a very interesting biology and I was focused on doing what we do best, to make it a useful compound for people with diabetes,” Lotte Bjerre Knudsen says.

Today, over 1 million people with type 2 diabetes globally use Victoza®. And in 2015, Saxenda® was launched in the US, Canada and Denmark for the treatment of obesity.



## HOW GLP-1 WORKS

Glucagon-like peptide-1 (GLP-1) is produced by the gut and the brain in response to eating. GLP-1 interacts with the pancreas to increase the amount of insulin in the body. It stimulates insulin secretion in the beta cells in the pancreas and reduces glucagon in the alpha cells. It does so in a glucose-dependent manner, which helps lower fasting and postprandial blood glucose. At the same time, GLP-1 increases feelings of satiety and reduces feelings of hunger – leading to a reduction in food intake.



### EVEN GREATER POTENTIAL

In the more than six years since Victoza® entered the market, Novo Nordisk has continued to study the GLP-1 molecule and has subsequently created semaglutide – another GLP-1 analogue that has shown great potential in phase 2 and 3 clinical trials.

The company's ever-growing expertise in protein engineering has enabled researchers to modify the fatty acid attached to the GLP-1 molecule, with the result that semaglutide remains in the blood plasma longer than liraglutide. This means that semaglutide can be taken once a week compared with the once-daily administration of liraglutide.

"I believe that once-weekly semaglutide has great potential as a treatment for type 2 diabetes," says Mads Krogsgaard Thomsen. "The results from phase 2 as well as four phase 3a clinical trials underscore how powerful this molecule might be." Semaglutide is currently completing phase 3a trials for type 2 diabetes and undergoing phase 2 trials for obesity.

### NEXT-GENERATION GLP-1

The development of semaglutide has also, for the first time, provided the opportunity for Novo Nordisk to develop a GLP-1 analogue that can be taken as a tablet. "When we first began working on GLP-1 analogues, people joked about creating a tablet version, as it was deemed impossible," explains Lotte Bjerre Knudsen. "One of the problems is that the uptake of a protein molecule is greatly reduced when it's taken orally – which is a huge problem because you'll need to administer a much larger amount, and there'll be too big a variability in how it works from day to day in the individual patient. But because semaglutide is a stable molecule, we've been able to get it to work in a tablet."

Once-daily oral semaglutide for type 2 diabetes will enter phase 3 clinical development in February 2016. Mads Krogsgaard Thomsen says: "Our phase 2 data were really exciting, with oral semaglutide efficacy data matching its injectable

counterpart. Oral semaglutide may therefore have the power of GLP-1 combined with the convenience of a tablet."

### NEW AVENUE OF RESEARCH

The potential of GLP-1 analogues for the treatment of conditions other than diabetes and obesity is also being investigated. Novo Nordisk plans to initiate a phase 2 clinical programme in 2016 to investigate semaglutide for the treatment of non-alcoholic steatohepatitis (NASH).

A common liver disease with no approved treatments currently, NASH may progress to cirrhosis, hepatocellular carcinoma and liver failure. NASH is currently the third most common cause for liver transplantation and is projected to be the leading cause for liver transplantation in 2020.<sup>14</sup> "The liver handles both glucose and fat metabolism. GLP-1 therapy therefore appears to be an attractive approach to treating this type of fatty liver disease because of its dual effect on blood glucose control and weight loss," says Mads Krogsgaard Thomsen.

"Today, we know that GLP-1 plays a key role in many of the biological processes in our body," he adds. "I truly believe that we have so much more to understand, discover and develop in this area."



## OBESITY CARE

# BUILDING THE MARKET FROM SCRATCH

How do you market a treatment for a disease that many doctors do not even acknowledge? That is the challenge facing Novo Nordisk following the launch of Saxenda®, the company's therapy for chronic weight management.

For those living with obesity, stigmatisation is a painful reality of day-to-day life. It is an ugly societal trope that begins with the bullies in the school playground, and ends with an unsympathetic doctor refusing to prescribe anything other than "eat less, exercise more".

It is also the main hurdle Novo Nordisk must overcome if the company is to make a success of Saxenda® (liraglutide 3 mg), its first foray into the obesity pharmacotherapy space. Although the product was recently launched in the US, where around 35% of the population has obesity,<sup>15</sup> it is by no means expected to become an overnight success.

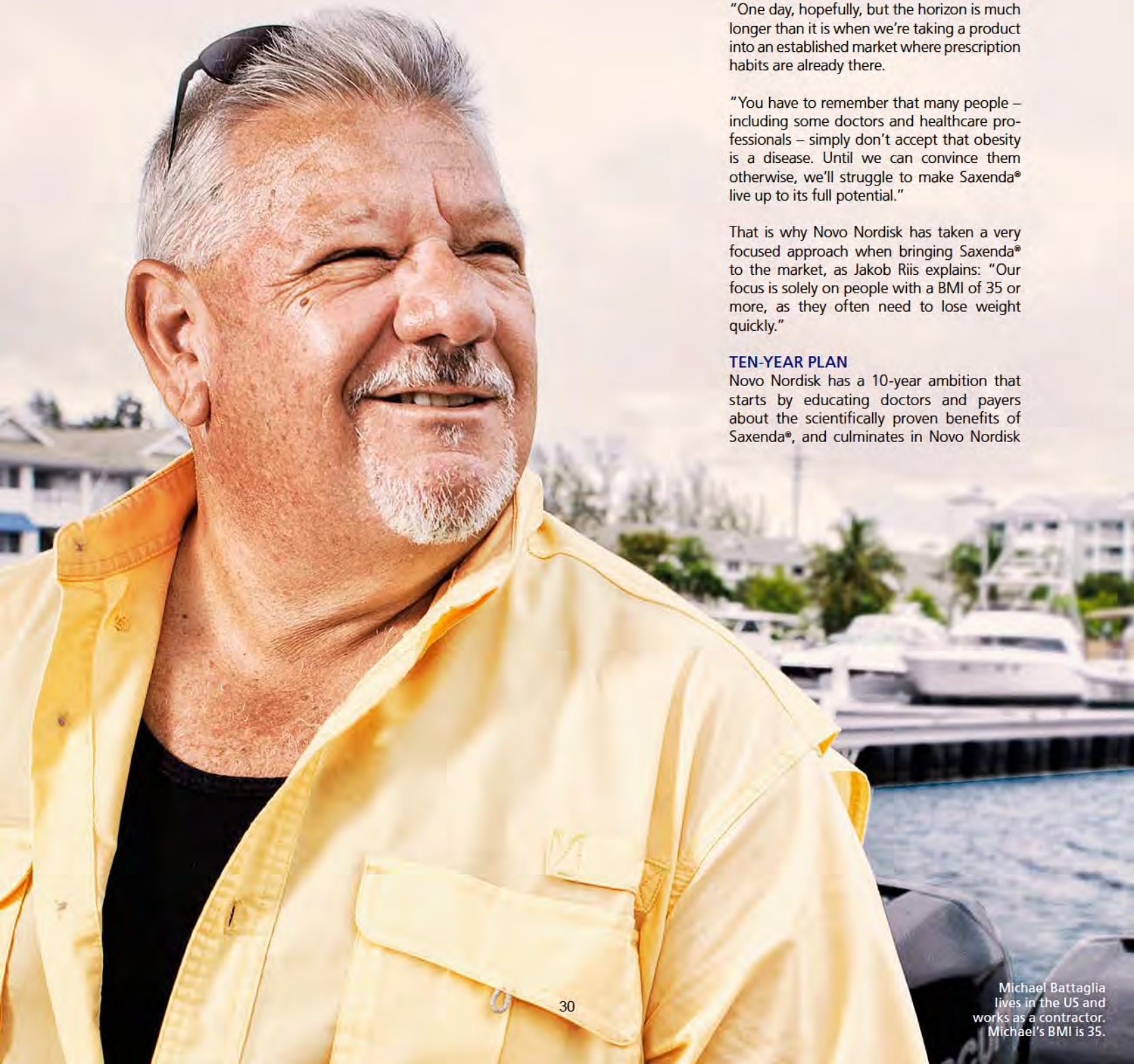
"Yes, Saxenda® has huge potential, but it's certainly not going to be an instant blockbuster," explains Jakob Riis, executive vice president of China, Pacific & Marketing. "One day, hopefully, but the horizon is much longer than it is when we're taking a product into an established market where prescription habits are already there.

"You have to remember that many people – including some doctors and healthcare professionals – simply don't accept that obesity is a disease. Until we can convince them otherwise, we'll struggle to make Saxenda® live up to its full potential."

That is why Novo Nordisk has taken a very focused approach when bringing Saxenda® to the market, as Jakob Riis explains: "Our focus is solely on people with a BMI of 35 or more, as they often need to lose weight quickly."

### TEN-YEAR PLAN

Novo Nordisk has a 10-year ambition that starts by educating doctors and payers about the scientifically proven benefits of Saxenda®, and culminates in Novo Nordisk



Michael Battaglia lives in the US and works as a contractor. Michael's BMI is 35.



establishing a leading position within the treatment of obesity.

"Our first aim is to make sure obesity is widely recognised as a chronic disease and that even a moderate weight loss of 5–10% could have an impact on weight-related comorbidities," Jakob Riis explains.

Novo Nordisk's ambition is to develop a leading obesity portfolio and pipeline that in 10 years' time will include several phase 3 programmes – with at least one promising even greater weight loss efficacy.

"These are fairly daunting tasks and, of course, we'll have to fine-tune our strategy as we go along," he admits. "However, we think this ambition – set out over a 10-year horizon – strikes the right balance between being ambitious and being achievable."

It is a plan that has already been put into action in the US, where Saxenda® was launched in April 2015. Thanks to the efforts of Novo Nordisk's field sales force, who have been on the road educating potential prescribers about the product's safety and efficacy profile since day one, Saxenda® is starting to reach those who need it the most.

#### PATIENTS BEFORE PROFITS

Although Saxenda® may not be generating huge amounts of revenue for the company just yet, Jakob Riis is clear that – initially, at least – success will not be measured in dollars and cents.

"In the short term, we'll be measuring success more in terms of the benefits it provides to patients – are they happy with the level of weight loss? We'll also be seeking acknowledgement from both pre-

scribers and payers that this product actually does what we say it does."

One man who knows all about patient needs is Joe Nadglowski, chief executive officer of the Obesity Action Coalition (OAC) – a 50,000 member-strong patient organisation dedicated to giving a voice to those living with obesity across the US. For him, Novo Nordisk is already making a big difference – and he is proud to call the company a partner in his organisation's fight to help improve the lives of the 78.6 million adult Americans affected by the disease.<sup>15</sup>

"Novo Nordisk is laying the groundwork to be seen as industry leader in the obesity space for many years to come," he says. "In the US, patients are looking for new options to treat obesity, so to now have weight-loss medications approved and available is a huge boon for those living with the disease.

"But more importantly, Novo Nordisk recognises the fact that not every therapy will work for every patient, and is therefore investing in a whole pipeline of future obesity treatments. Couple this with a genuine desire to engage with and listen to the patient community, and it's a recipe for lasting success."

#### THE BEGINNING OF THE BEGINNING

So what is next on the obesity agenda? According to Executive Vice President and Chief Science Officer Mads Krogsgaard Thomsen, Saxenda® is just the beginning of an exciting new chapter for Novo Nordisk.

"With Saxenda®, we can help people understand that obesity is a disease often requiring medical intervention and gradually build the market," he says. "My hope is then that our Seattle research site, together with our strong

academic network, will be able to pick up new targets and begin creating new biologics which can make an even bigger difference in terms of both physical health and quality of life for people with obesity."

One molecule already showing great potential is semaglutide (see p 26). Like liraglutide, it is a long-acting glucagon-like peptide-1 (GLP-1) analogue, but recent phase 3 study results suggest it may be significantly more effective for the treatment of obesity.

According to Mads Krogsgaard Thomsen, the most impressive results may ultimately be derived from combination therapies – an area he describes as 'the playground' of Novo Nordisk R&D.

"Ten years down the road we have some very strong ambitions for new obesity medicines – specifically, combination therapies that work synergistically," he adds.

A glance at the pipeline gives a hint of what is in store. Aside from semaglutide, there are already three promising new candidates in development at Novo Nordisk for the treatment of obesity: NN9030, a novel glucagon analogue designed to be used in combination with liraglutide, NN9838, a novel long-acting amylin analogue, and NN9747, a novel long-acting PYY analogue (PYY is a human peptide, secreted in response to a meal, that has been shown to reduce appetite).

"This is only the beginning of the beginning," Mads Krogsgaard Thomsen says. "With our obesity pipeline and strategy, we're in a fantastic position to secure a leadership position within the field for many years to come, to the benefit of people who are struggling with obesity."

#### WHAT IS OBESITY?

Obesity is defined as abnormal or excessive fat accumulation that may impair health for people with a body mass index (BMI) of more than 30. BMI provides the most convenient population-level measure of overweight and obesity currently available.<sup>2</sup> BMI itself, however, does not define health risk. BMI is a simple weight-for-height index that is commonly used to classify overweight and obesity in adults. It is calculated by dividing a person's weight in kilograms by the square of the person's height in metres (kg/m<sup>2</sup>).

**34.9%** OF THE US ADULT POPULATION  
(OVER THE AGE OF 20)  
HAS OBESITY (BMI >30)\*

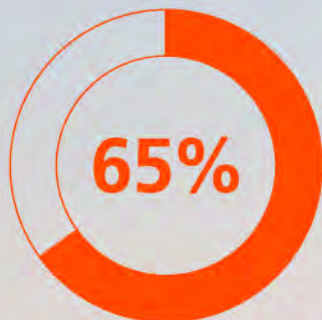
\* Ogden CL, Carroll MD, Kit BK & Flegal KM. Prevalence of Childhood and Adult Obesity in the United States, 2011–2012. *The Journal of the American Medical Association* 2014; 311(8):806–814.



# TACKLING THE RISE OF DIABETES IN CITIES

What makes people in cities vulnerable to diabetes, and how can we prevent people from getting diabetes in the first place?

The inaugural Cities Changing Diabetes Summit saw these questions and many more discussed, as over 250 international delegates descended on Copenhagen in November 2015.



OF PEOPLE WITH DIABETES  
LIVE IN URBAN AREAS<sup>1</sup>

Cities are home to two-thirds of the world's 415 million people living with diabetes and, as the number of people with diabetes reaches 642 million, it is projected that this proportion will rise to three in four people by 2040.<sup>1</sup> Whilst cities have the potential to bring about significant health benefits for residents, the vast human and economic burden of diabetes is currently being driven by the way people live in cities.

In its second year of responding to this challenge, the Cities Changing Diabetes partnership has gathered momentum. Founding partners Novo Nordisk, University College London (UCL) and Steno Diabetes Center have been joined by five study cities –

Copenhagen, Houston, Mexico City, Shanghai and Tianjin. In 2016, Johannesburg and Vancouver will join the effort to identify, understand and address the root causes of diabetes in cities.

## UNDERSTANDING THE CHALLENGE

The Cities Changing Diabetes programme has a three-phase strategy – to map the challenge, to share learnings with cities around the world and to act as a catalyst for action to defeat the rise of diabetes in cities. The mapping phase provides a foundation for future interventions, as Jakob Riis, executive vice president at Novo Nordisk, explains: "We know that certain urban diets and lifestyles are driving diabetes, but we can't hope to address these issues without first understanding what lies behind them. In the same way that Sherlock Holmes asked 'why didn't the dog bark?', so our research needs to ask intelligent, new questions to bring about a deeper knowledge of this unprecedented challenge."

In 2015, the initial mapping phase resulted in the completion of the world's largest study on urban diabetes, led by UCL in collaboration with leading researchers in the five study cities. Trained fieldworkers undertook more than 550 interviews with people at risk or already diagnosed with diabetes. This first-of-its-kind research found that vulnerability to diabetes in cities around the world is influenced far more than previously thought by social and cultural factors.

Multiple examples of these factors were found in each study location and frequently came as a surprise to experienced researchers. In Mexico City, gender roles



were seen to directly influence vulnerability to diabetes as women neglected their own health to avoid being seen as burdensome. In Shanghai, the cultural trend for the denial of hardship meant that people with diabetes were less likely to seek help from friends, family or healthcare professionals. Such was the strength of social and cultural factors in Houston that the findings challenged the traditional notion of disadvantage being equal to vulnerability, as segments of society both with and without financial constraints had an increased risk of diabetes.

Importantly for future research and intervention strategies, the findings will be useful across the diabetes spectrum – from initial risk through to diagnosis and treatment. Furthermore, although the factors manifest themselves uniquely in different cities, they will help build a framework that will enable a consistent approach to understanding diabetes in other cities around the world.

David Napier, professor of Medical Anthropology, UCL and global academic lead, believes that the research has moved traditional thinking about urban diabetes forward: “For the first time, we can confidently say that we have a holistic understanding of vulnerability to diabetes in cities. In particular, our new-found appreciation of the cultural and social drivers of the condition means that we can consider how and why past interventions may have fallen short, and consider new solutions for traditional problems such as diet and inactivity.”

#### TRANSITION TO ACTION

The Cities Changing Diabetes Summit marked the first major milestone for the partnership and provided the first opportunity for the partners to come together to discuss the findings and share local learnings and experiences. It also provided a forum for transition, as delegates from 27 countries turned their minds to the action phase of the programme. To facilitate this step, keynote speakers and workshops focused not only on diabetes but also on urban planning, collaborative working and peer support.

After opening the Summit, Frank Jensen, Mayor of Copenhagen, commented: “Through this partnership, we have – on the one hand – been reaffirmed on why Copenhagen has succeeded in becoming such a liveable city. But we’ve also – on the other hand – realised in which areas we need to act in order to improve the health and well-being of our citizens. Having come together with colleagues from other cities, partners and expert contributors at this Summit, we’re now ready to put in place new solutions that safeguard and improve the health of our citizens in Copenhagen.”

Across the five cities, the action phase has been gathering pace throughout 2015. Through town hall meetings, the partners have already engaged hundreds of stakeholders, including non-governmental organisations (NGOs), faith-based groups, employers, health providers and beyond, to share local learnings and insights and to form

**BY 2050, 2/3  
OF THE WORLD'S  
POPULATION IS PROJECTED  
TO BE URBAN<sup>16</sup>**

action plans. In order to drive the prevention, early detection and improved treatment of diabetes, upon leaving the Summit, delegates voted to focus action on areas including community-level interventions beyond the traditional scope of clinical care and the integration of health within urban planning and municipal policies.

For Novo Nordisk’s part, a further 20 million US dollars of expert resource and research funds has been committed to the fight against urban diabetes by 2020. In addition, a partnership with C40 – the world’s largest network of megacities – was announced in December 2015 to move health up the agenda of those managing and designing the world’s urban environments.

Looking ahead, President and CEO of Novo Nordisk Lars Rebien Sørensen reflected: “We remain convinced that addressing diabetes in the urban setting is the right thing to do – both by our company and by the global community which we serve. We’re committed to changing diabetes, and preventing the rise of this condition through healthy cities is fundamental to this objective.” Read more about the Cities Changing Diabetes partnership, visit [citieschangingdiabetes.com](http://citieschangingdiabetes.com).





# 30 YEARS OF CHANGING HAEMOPHILIA

Building on its experience with NovoSeven®, Novo Nordisk has in recent years expanded its presence in haemophilia with NovoThirteen® and NovoEight®, underscoring its commitment to help defeat this serious condition.

Not so long ago, the outlook for a person who developed antibodies (inhibitors) against standard haemophilia treatments was very bleak, but in June 1985, Novo Nordisk began a groundbreaking project to develop recombinant factor VIIa – the active ingredient in NovoSeven®. After more than a decade of development, NovoSeven® was launched, enabling the blood of inhibitor patients to form stable clots without the use of standard blood factor treatments. As NovoSeven® is not derived from human blood plasma, this innovative product also addressed concerns at the time regarding safety in relation to blood contamination.

Paul Huggins, who heads Novo Nordisk's global marketing of biopharmaceuticals in Zurich, Switzerland, appreciates what a big – and risky – step the development of NovoSeven® was for the company. "The business case was not convincing as the patient population was only a few thousand people globally. But the company's management decided nevertheless that it couldn't ignore the unmet medical need as Novo Nordisk had the capabilities to develop a compound that would potentially meet this need," he explains.

NovoSeven® went on to become a very important treatment option, used for the on-demand treatment of bleeding episodes and the management of bleeding during surgery for people with haemophilia with inhibitors, acquired haemophilia, factor VII deficiency and Glanzmann's thrombasthenia.

## GIVING PEOPLE A CHOICE

By the mid-2000s, Novo Nordisk started developing new and innovative factor VIII, IX and XIII treatments for bleeding disorders.

## NOVO NORDISK HAEMOPHILIA FOUNDATION

On 25 January 2015, the Novo Nordisk Haemophilia Foundation celebrated its 10th anniversary. The Foundation is a grant-making non-profit organisation that strives to improve access to care for people with haemophilia and allied bleeding disorders. Since it was established, the Foundation has supported 168 programmes in 63 countries in the developing world, where many people with bleeding disorders still lack proper diagnosis or adequate care. Read more on [nnhf.org](http://nnhf.org).

## WHAT IS HAEMOPHILIA?

Haemophilia is an inherited or acquired bleeding disorder that prevents the blood from clotting. People with haemophilia either partially or completely lack an essential clotting factor needed to form stable blood clots. Without treatment, uncontrolled internal bleeding can cause stiffness, pain, severe joint damage and even death. Treatment with replacement clotting factors may be administered when bleeding occurs or, increasingly, on a preventive basis (prophylactic treatment). People with haemophilia A, an estimated 350,000,<sup>17</sup> have absent, decreased or defective production of the blood clotting factor VIII. People with haemophilia B, of whom there are some 70,000,<sup>18</sup> have deficiencies in producing clotting factor IX. Both types are inherited.

"In 2012, we launched NovoThirteen®, which is marketed as Tretten® in some countries, for a very small and vulnerable community of people with congenital factor XIII deficiency, which is an extremely rare and serious bleeding disorder affecting only about 1,300 people globally," says Paul Huggins. "We then had two products for patient communities which hadn't previously attracted a lot of attention from companies engaged in haemophilia – which made the launch of NovoEight® last year very important to us, as it was our first treatment for the wider haemophilia community."

At the time of approval, NovoEight® was the first new recombinant factor VIII treatment for people with haemophilia in Europe and Japan for over a decade. It was launched in Europe and Japan in 2014 and in the US in 2015. "NovoEight® has been very well received in the US; the uptake has exceeded our expectations. Patients like – and deserve – a choice, which is why I think the haemophilia community has welcomed NovoEight®," explains Paul Huggins.

## THREE DECADES OF RESEARCH AND DEVELOPMENT

Thirty years on, and Novo Nordisk's commitment to the haemophilia community – which began with NovoSeven® – is undiminished.

With its long-acting versions of factor IX (N9-GP) and VIII (N8-GP), which Novo Nordisk expects to submit for regulatory approval in 2016 and 2018 respectively, the company aims to provide even more options for people with haemophilia.

Novo Nordisk also has a long-acting version of a recombinant factor VIIa in pre-clinical development, which it hopes will make routine prophylaxis the norm for people with inhibitors. Moreover, the company is developing a monoclonal antibody against Tissue Factor Pathway Inhibitor (TFPI), which is intended for prophylactic treatment after subcutaneous administration (see R&D pipeline on [p 21](#)).

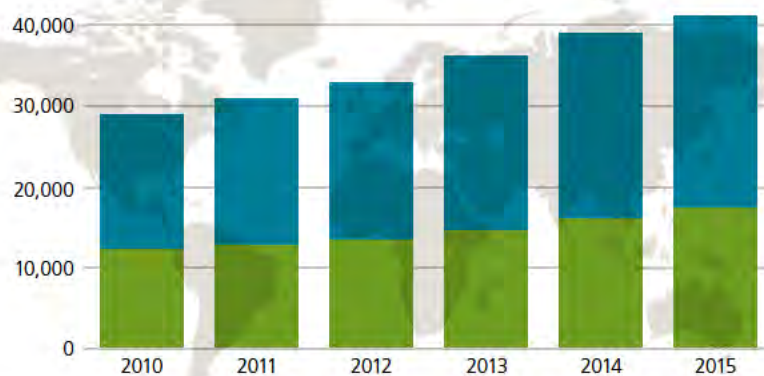


# THE PEOPLE BEHIND IT ALL

Behind every great company are great people. In Novo Nordisk's case that's 40,000+ people who day in, day out, play their part in making the complex machinery of a global organisation work smoothly—with competence, commitment and a passion for improving the lives of people with diabetes and other serious chronic conditions. Here are a few numbers about the people behind Novo Nordisk.

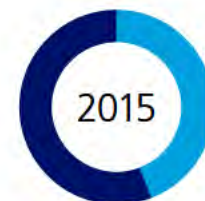
## EMPLOYEE DEVELOPMENT \*

■ Denmark ■ Outside Denmark



## MANAGEMENT APPOINTMENTS \*\*

# 1,373

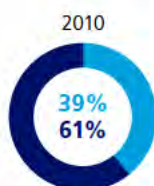
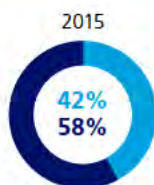


44%  
WOMEN  
56%  
MEN

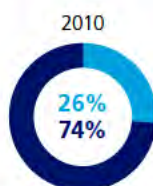
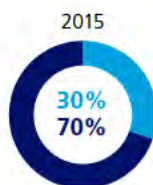
## PROGRESSING GENDER DIVERSITY IN MANAGEMENT

■ Women ■ Men

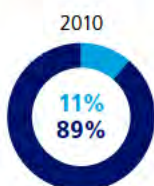
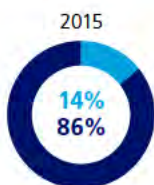
### Managers/ Team Leaders



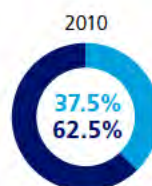
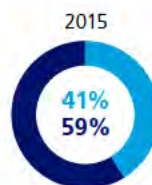
### Corporate Vice Presidents/ Vice Presidents/ General Managers



### Executive Vice Presidents/ Senior Vice Presidents

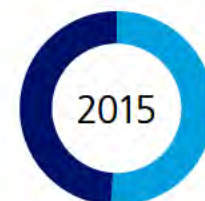


### Total



# 1,827

## INTERNAL PROMOTIONS \*\*\*



51%  
WOMEN  
49%  
MEN

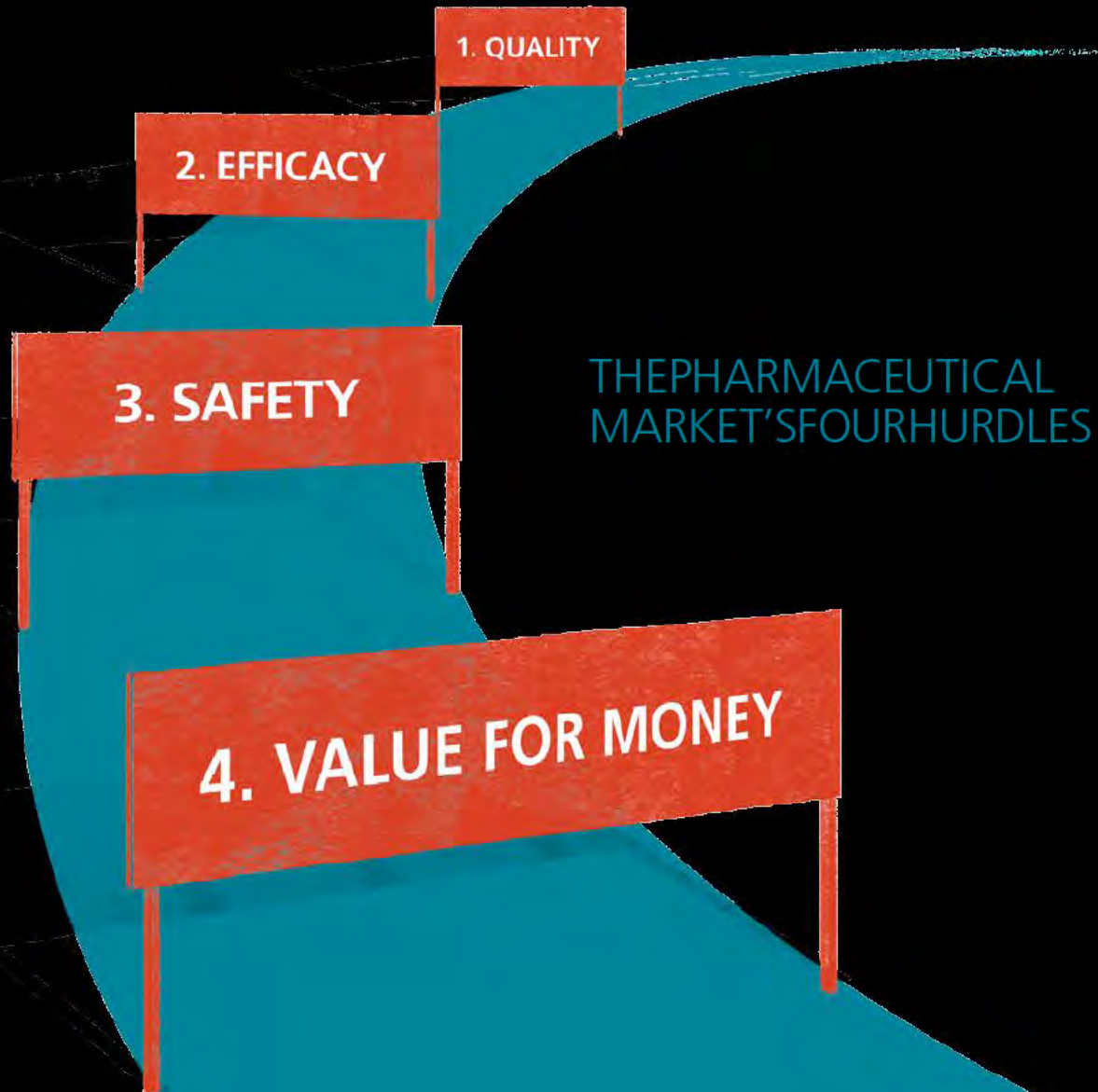
OVERALL  
RETENTION RATE \*\*\*\*  
**90.8%**

ENGAGEMENT  
SCORE \*\*\*\*\*  
**4.3**

\* Development in the number of employees excl. NNITA/S. \*\* All appointments to management positions, incl. internal promotions and external hires in 2015 excl. NNITA/S. \*\*\* Employees moving to a job at a higher level within a 12-month period excl. NNITA/S. \*\*\*\* Retention of employees excl. NNITA/S. \*\*\*\*\* Working the Novo Nordisk Way (scale 1–5).

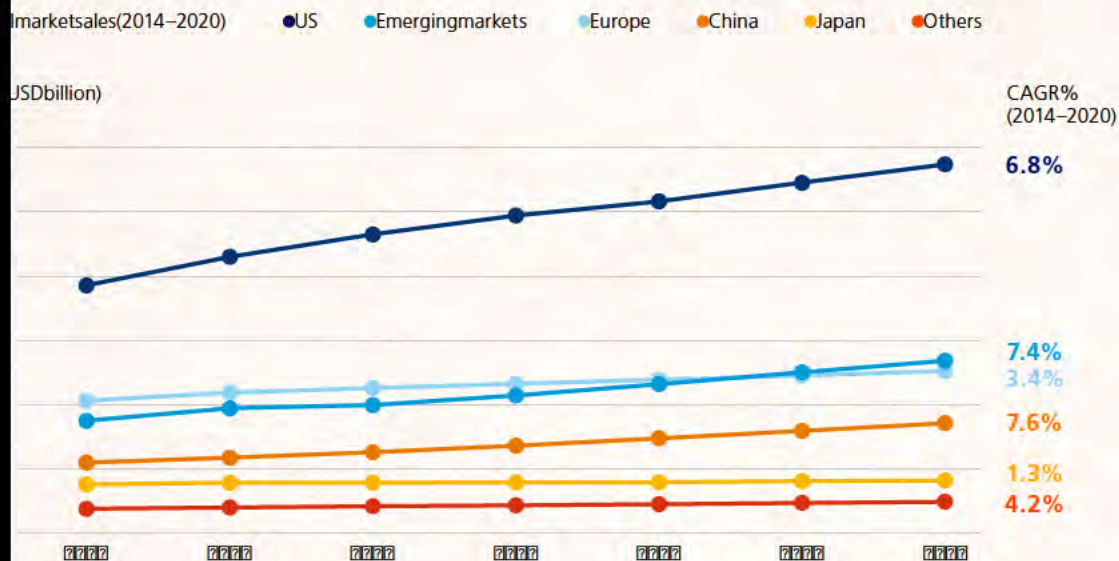


# THE FUTURE OF





## GLOBAL PHARMA MARKET IS FORECASTED TO GROW 6% ANNUALLY IN THE PERIOD 2014–2020: THIS BRINGS THE TOTAL MARKET TO USD 1.4 TRILLION IN 2020.



Source: IMS Market Prognosis Global Sept 2015. At ex-manufacturer price levels, not including rebates and discounts.

governments, healthcare professionals, patients, companies and a host of intermediaries are engaged in tough negotiations about which patients should have access to products and services, at what cost and, let us not forget the bill.

It is rightly so that this is not a new discussion. For as long as healthcare systems, there have been discussions about access, cost and quality – the three foundational pillars of a healthcare system. However, what many patients have experienced in recent years is that cost containment has become the primary driver when healthcare systems implement new technologies. One consequence is that more patients are denied access to pharmaceuticals and healthcare services that they would previously have expected to be covered by their insurance system or insurance.

The industry is feeling the effects of the strong focus on cost containment. The reform of the pricing and reimbursement system sometimes results in reimbursement being denied by payers. In the US, exclusion from the formularies of payers is a common occurrence.

For new products, research-based companies are facing a new hurdle known as the ‘fourth hurdle’ – being required by payers to demonstrate that their new products, in addition to being of high quality and safe, also represent good value for money. This hurdle, companies need to show that their products are more effective than relevant comparators and that the increased costs are justified elsewhere in the healthcare system. While this is an unreasonable demand, it is often difficult to demonstrate that the benefits of using a new product may be realized years later – which, for someone charged with the current year’s budget, is not an attractive proposition.

As a case in point: a new treatment may help a patient achieve better control of their blood glucose than the current treatment. In the short term, this may give the person a better

quality of life – which is important – but the biggest cost savings are likely to come much later, from the reduced risk of developing serious long-term complications from diabetes: blindness, amputations and nerve damage. In the US, for example, it has been estimated that of the total healthcare spending on diagnosed diabetes, hospital inpatient care accounts for 43%, medicines to treat complications 18%, diabetes medicines and supplies 12% and other costs 27%.

Novo Nordisk Executive Vice President Jakob Riis, whose responsibilities include ensuring market access for the company’s products, mentions another complicating factor when pharmaceutical companies and payers negotiate the pricing and reimbursement of a product: “There’s no commonly agreed standard for evaluating whether a new treatment will lead to an improved health outcome for certain patients and the financial value of this. Each healthcare system seems to do this in its own way.”

One general trend, though, is that payers want more ‘real-world evidence’ of the benefit of a new product in addition to the data on efficacy and safety from the clinical trial that formed the basis of its approval by health authorities. Payers want to know whether similar results can be achieved in real life, when patients are not part of a clinical trial.

“We’ll have to find ways to collect and analyse real-world evidence in ways that satisfy payers. This will be a focus area for our development and market access organisations in the coming years,” says Jakob Riis.

In this context, he mentions the opportunities presented by an increasingly digitalised healthcare system and, as an example, highlights a partnership Novo Nordisk formed with IBM Watson Health in December 2015: “By combining our leadership in diabetes care with the analytical power of IBM Watson Health’s cognitive computing capability, we’ll explore possibilities for improving diabetes care through the gathering and analysis of real-time, real-world evidence from current diabetes treatment. If successful, this will not only help improve the lives of people with diabetes by making

CONTINUED ►



## HEALTHCARE PROFESSIONALS ARE CONSOLIDATING INTO INTEGRATED DELIVERY NETWORKS IN THE US



### Traditional model

Independent practices and hospitals paid on a fee-for-service basis

Patient management

The pressures on healthcare professionals and market trends point in the same direction: towards organisation and corporatisation of primary care

PRESSURE TO REDUCE COSTS  
MISALIGNED INCENTIVES  
HEALTH INFORMATION TECHNOLOGY  
FEDERAL & STATE HEALTH REFORM  
NEW MODELS OF CARE DELIVERY  
GROWING PATIENT EMPOWERMENT



### New model

Fully integrated delivery networks paid for delivering certain performance or outcome targets

Population management

the management of the condition more simple, effective and measurable, but will also help satisfy the payers' demand for real-world evidence of the benefits of our products."

### THE IMPORTANCE OF INNOVATION

Despite market access challenges and price pressure, the pharmaceutical industry is still expected to grow. The need for more and better pharmaceuticals keeps growing with ageing populations and the increasing prevalence of chronic diseases, such as type 2 diabetes, that come with age, unhealthy eating habits and too little exercise. At the same time, economic growth in some countries will allow for more funds to be invested in better healthcare. Given this landscape, IMS Health, a leading global information provider, predicts that the pharmaceutical industry will grow global sales by 6% per year between now and 2020.

Not all companies will do equally well and, for some, the only option is to let themselves be acquired or merged with another company. In October 2015, Thomson Reuters reported that more than 850 billion US dollars of merger and acquisition transactions had been announced since the start of 2014.

"Novo Nordisk has no plan to engage in such industry consolidation," says President and CEO Lars Rebien Sørensen. "I appreciate that such moves can help boost profits when sales are under pressure, but only in the short term. The only way to drive value in the long term is by innovation. As long as our research and development organisation can continue to discover new treatments that are first in a new class or significantly better than products in an existing class, we'll be able to grow. We currently have a very strong pipeline of products that we'll be launching in the coming years. Our main challenge will be to make them accessible to as many patients as possible while obtaining a price that reflects the clinical value the new products bring. That's no easy task in today's healthcare environment, but it's one we're determined to carry out."

The following is an overview of the world's main pharmaceutical markets.

### UNITED STATES

The US is the world's largest market for pharmaceuticals, accounting for roughly 44% of global sales. Product success is largely based on competition on efficacy, safety, quality and price.

The US healthcare system is complex, as it involves multiple payers and intermediaries with complex interactions. Roughly half of all Americans are insured by their employers – this is known as the managed care segment. One-third is insured through public programmes, such as Medicare and Medicaid, while around 9% of Americans are uninsured. The number of people insured through public programmes is expected to grow, while the number of people uninsured is expected to drop in the coming years due, among other reasons, to the public exchanges that were established as part of the Affordable Care Act. To manage the purchase and delivery of healthcare, employers and the government contract with intermediaries such as health plans and pharmacy benefit managers (PBMs). These are often referred to as payers, but are in most cases managers of healthcare costs on behalf of payers.

Health plans contract with providers such as physician, hospital and pharmacy networks to provide the required service. They provide different levels of coverage based on the payers' willingness to pay for selected services for their employees. A PBM is an intermediary that contracts with payers and health plans to manage the pharmacy benefit for a specific population.

The health plans use various methods to manage the use and cost of pharmaceuticals. Among the most widely used interventions are generic substitution, quantity limits, prior authorisation (which means that a medication will only be covered under certain conditions and subject to individual approval by the health plan) and tightly controlled Preferred Drug Lists.

### FOCUS IS SHIFTING TO VALUE

While, for many years, healthcare in the US was delivered by small, independent practices and hospitals, and paid for as a fee-for-service, more and more healthcare providers are now becoming part of fully integrated delivery networks. Moreover, new payment models are emerging, with a growing number of accountable care organisations being paid for delivering certain performance or outcome targets rather than a fee-for-service.

At the same time, the managed care segment is consolidating, leading to fewer, more powerful payers. As a result, rebate negotiations have become tougher for the pharmaceutical industry. Contracts are generally of shorter duration than before and often



have price protection mechanisms built in, which means that list price increases automatically trigger an increased rebate level.

Another trend of note is the increasing number of people obtaining coverage through Medicare Part D. Therebates that pharmaceutical companies must offer for contracts under this scheme are generally higher than for private market contracts. Nevertheless, the US, which in 2015 accounted for 51% of total Novo Nordisk sales, is where the company expects to generate most of its growth in the coming years. The main growth drivers are expected to be market share gains in the insulin market, upgrades to new-generation insulin products and the continued penetration of GLP-1 products for the treatment of diabetes and obesity.

#### EUROPE

Europe has been a market with no or very limited growth for most pharmaceutical companies for quite some years. This is partly the result of the depressed economy in many European countries in the wake of the financial crisis, which has led governments to implement cost-cutting measures in many shapes and forms. There are currently no signs that this will change significantly in the near future. IMS predicts low single-digit growth in the coming years, with almost all growth coming from speciality drugs. Novo Nordisk also expects very modest growth in Europe due to the above-mentioned factors, increasing competition and its high market share in the insulin segment.

#### CHINA

China is the world's second largest healthcare market. Annual growth rates of 15–20% were the norm until recently, as the Chinese government invested heavily in expanding access to healthcare, especially in larger cities. Investments came in response to growing demands from an ageing population increasingly prone to diabetes and other chronic diseases that often come with urban lifestyles. However, all signs are that double-digit growth rates are history. With the slowdown in China's economic growth in 2014 and 2015, the government now has a stronger focus on cost containment. Increased use of essential drug lists and a new drug price review process serve to force prices down. Moreover, specific measures have been taken to reduce hospitals' reliance on drugs sales as a source of income and limit pharmaceutical companies' access to healthcare professionals.

China is Novo Nordisk's second largest market. An estimated 110 million Chinese have diabetes and less than a quarter of them receive medical care, so despite the factors mentioned above—as well as increasing competition from international and local competitors—Novo Nordisk expects continued growth in the coming years, albeit not at the double-digit growth rates seen in the past.

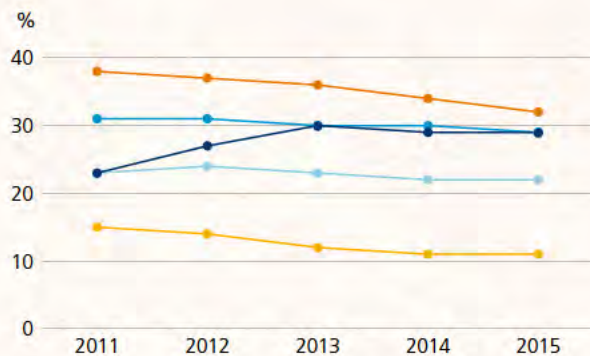
#### EMERGING MARKETS

China is far from the only country facing the growing burden of chronic diseases. Growing economies in Asia, the Middle East, Africa

#### DIABETES CARE

Value market share by geographic region

- North America
- Europe
- International Operations
- Region China
- Japan & Korea



and Latin America are experiencing exactly the same phenomenon. IMS predicts that close to 50% of pharmaceutical market growth in 2015–2020 will come from these countries as populations grow and age, and economic growth makes it possible for more people to get some form of healthcare. At Novo Nordisk, these countries are grouped under International Operations—a vast and diverse region of more than 140 countries.

Next to the US, the countries in International Operations represent Novo Nordisk's largest growth opportunity in the coming years. Half of all people with diabetes live in this region, and the number is growing faster than anywhere else. In many of the countries, there is both a public and a private market. The public market typically only reimburses the use of low-priced human insulin, while the private market typically comprises modern insulin and Victoza<sup>®</sup> paid for by people who either have private insurance or who can pay out of their own pockets at prices similar to those in more developed markets.

#### JAPAN

In Japan, the government will be implementing price revisions, which, together with the increased utilisation of generics, means that IMS predicts a flat market. Furthermore, the insulin market is declining due to the increased use of newer oral antidiabetics, which is why Novo Nordisk, despite success with Tresiba<sup>®</sup> and Victoza<sup>®</sup> and with the launch of Ryzeodeg<sup>®</sup>, expects very modest growth in Japan in the coming years.

"We currently have a very strong pipeline of products that we'll be launching in the coming years. Our main challenge will be to make them accessible to as many patients as possible while obtaining a price that reflects the clinical value the new products bring."

**LARS REBIENSØRENSEN**  
PRESIDENT AND CEO





# GLOBAL DEMAND TRIGGERS MAJOR PRODUCTION INVESTMENTS

In 2015, Novo Nordisk announced plans for major investments in new production plants.

Manufacturing proteins, such as insulin, is a highly sophisticated task. While other pharmaceuticals are manufactured through a series of chemical syntheses, proteins are bigger, more complex molecules, and producing them relies on large investments in sterile production facilities and an understanding of working with living cells, such as yeast, to produce a pure, uniform product.

“Novo Nordisk is the world’s largest producer of insulin and has developed its production expertise over almost nine decades,” says Henrik Wulff, executive vice president and head of Product Supply. “We’ve been manufacturing insulin since the 1920s, and the efficient large-scale production of proteins is one of our core competences.”

“There have been many innovations over the years as we continuously strive to make our production processes even more efficient and stable,” he continues, “and our focus has stayed the same – on increasing ambitions: delivering high-quality products in regulatory compliance and meeting the increasing global demand for our products.”

## MEETING GLOBAL DEMAND

The year 2015 was an exciting time for Product Supply, as Novo Nordisk announced several plans for major investments in new production plants over the next five years. This will also be evident from Novo Nordisk’s accounts in the coming years, according to Novo Nordisk’s chief financial officer, Jesper Brandgaard. Commenting on investments at Novo Nordisk’s Capital Markets Day in November 2015, he said: “Demands to support future product supply are rising, and we expect investments relative to sales will increase in the years to come.”

The largest planned investment is a diabetes API (Active Pharmaceutical Ingredient) production site in Clayton, North Carolina, USA. The site is expected to be operational in 2020 and is estimated to create close to 700 new production and engineering jobs in Clayton, where Novo Nordisk already employs more than 700 people. A further 100 new jobs will be created at a new drug product plant in Måløv, Denmark. Novo Nordisk plans to invest 2 billion US dollars in these two facilities in the next five years.

Among other major expansion projects announced in 2015 is a filling facility in Hillerød, Denmark, which will produce medicines for the treatment of diabetes and obesity. This 10,300 m<sup>2</sup> production facility is expected to be operational in 2019 and will add 450 new production and engineering jobs to the 1,900 jobs already there.

“These and other investments in our manufacturing capacity are a response to the increasing demand for Novo Nordisk’s products, which is mainly driven by the growing global incidence of diabetes,” explains Henrik Wulff.

“With the initiation of these large investments, we plan to have sufficient capacity for current and future diabetes products well into the next decade,” he says, “and with the new facility in Måløv, we’ll be able to produce protein-based medicines such as semaglutide in tablet form on a large scale. This is something only few believed would be possible just a couple of years ago.”





#### ADDRESSING LOCAL NEEDS

Meeting local needs is also a priority for Product Supply, which is why, in April, Novo Nordisk opened a new insulin formulation and filling facility in Russia and, in September, announced that it would be the first western pharmaceutical company to build a manufacturing plant in Iran, for pre-filled insulin injection devices.

"Local plants allow us to react fast to local requirements and support our business in future key markets," Henrik Wulff says.

#### SECURING A HIGH-QUALITY SUPPLY

The compliance and quality of products are the primary focus for all employees in Product Supply. Every Novo Nordisk manufacturing facility, no matter where it is located, must comply fully with international and national regulations as well as adhere to the company's global quality management system.

"We have a very robust quality management system at Novo Nordisk, which we rely on when building competences and organizations across the world," explains Henrik Wulff. "We use this system, along with our

considerable manufacturing expertise and knowledge, to ensure that we maintain consistently high standards in our production processes globally."

#### THE ADDED COMPLEXITY OF AN EXPANDING PORTFOLIO

The complexity of Novo Nordisk's manufacturing has increased in the past few years as new products have been added to the company's existing portfolio at a fast rate than at any time previously. In addition, new products are typically more sophisticated molecules than first-generation products, generally demanding more complex production processes.

"Our growing capacity and production complexity require best-in-class planning and execution capabilities," Henrik Wulff points out. "Product Supply works 24 hours a day, 365 days a year, and has to fulfil many important tasks worldwide every day to ensure we succeed in ensuring high-quality products for more and more patients."

"Ultimately, it all comes back to the needs of our patients. They expect high-quality products and we have to make sure we can deliver them – on time and in compliance with the requirements of the authorities – both now and in the future."

#### NOVO NORDISK PRODUCTION SITES AROUND THE WORLD





## ENVIRONMENTAL STRATEGY

# DOING MORE WITH LESS

By 2020, all Novo Nordisk production facilities worldwide will be run on renewable power, but what about its suppliers' CO<sub>2</sub> emissions?

For decades, Novo Nordisk has been focusing on reducing its impact on the environment, and in 1993 it became one of the first global companies to report annually on its environmental performance and set targets for future improvements.

The environmental strategy has changed over time since Novo Nordisk's first Environment Department was established in 1973. Initially, the focus was on decreasing emissions of pollutants to air and water through so-called end-of-pipe solutions to ensure compliance. "Today, we have good systems and controls in place," says Henrik Wulff, executive vice president in charge of Product Supply. "Energy-, water- and waste-reducing initiatives are part of our normal operations."

### GHG PROTOCOL

The Greenhouse Gas (GHG) Protocol Initiative is working with businesses, non-governmental organisations and governments with the mission to develop internationally accepted GHG accounting and reporting standards.

The Protocol defines three scopes to help define direct and indirect emissions sources:

1. Direct GHG emissions from sources that are owned or controlled by the company, for example from production processes.
2. Indirect GHG emissions from the generation of purchased electricity consumed by the company.
3. Other indirect GHG emissions which are a consequence of the company's activities but occur from sources not owned or controlled by the organisation. This includes emissions associated with waste, water, business travel, commuting and procurement.

In 2010, Jing Tommy Wan started working as a Filling Professional in Tianjin, China, and in August 2015, he joined Novo Nordisk Production in Hillerød, Denmark.



## FOCUS OF THE NEW CLIMATE AMBITION



For the past 10 years, the environmental strategy has had a strong focus on reducing CO<sub>2</sub> emissions from Novo Nordisk's own production plants. So much so that the company announced a long-term target in 2006: Novo Nordisk committed to cutting its production-related CO<sub>2</sub> emissions by 10% within 10 years, using 2004 data as the baseline.

"At the time, this was a really ambitious target, which we knew would be difficult to achieve," says Vibeke Burchard, senior global project manager for Novo Nordisk's environmental strategy. "We were and still are a growing company, and forecasts showed our energy consumption would increase three fold in this period – yet we committed to reducing emissions by 10% in absolute terms."

#### RENEWABLE POWER

This focus on emissions from production sites proved very successful. By implementing energy efficiency programmes and using more renewable power – including switching all its production plants in Denmark to renewable power from wind farms in the North Sea – Novo Nordisk actually went on to achieve this ambition in 2010.

Since then, the company has refined and optimised its energy management even further, and recently announced a bold, new target: that all Novo Nordisk production facilities worldwide would be run on renewable power by 2020.

"Setting an absolute target of zero CO<sub>2</sub> emissions from power used at production sites in just five years is very ambitious, as our production is growing to meet the increasing global demand for our products. We've started identifying renewable sources, including wind and solar power, for all our production facilities," says Dorethe Nielsen, senior director of Corporate Environmental Management.

Novo Nordisk recently signed a wind power contract for its production site in Tianjin, China, and is currently investigating the use of renewable power for its plants in Clayton, North Carolina in the US, and Chartres in France.

Once all its power consumption comes from renewable sources, the company aims to replace the steam supply in its production facilities, which is currently based on fossil sources such as coal or gas, with renewable sources such as biomass or biogas.

The realisation of this ambition recently came a bit closer when DONG Energy, an energy company supplying Novo Nordisk with steam for insulin production in Denmark, initiated a feasibility study to shift from coal to biomass. A positive outcome to this study will mean renewable steam supply from 2019 onwards. The feasibility study is the result of a partnership with other local companies.

#### CLIMATE IN FOCUS

Now the company is ready to take the next step in its environmental strategy. "Once we're using renewable energy in all our production facilities, we'll have done as much as we can with direct carbon emissions," Dorethe Nielsen explains. "We're therefore broadening the scope of our strategy and will work on reducing the CO<sub>2</sub> impact from so-called indirect emissions – these are emissions from sources not controlled by us, such as the goods and services we purchase, from raw materials to business flights."

Novo Nordisk will focus on specific types of indirect emission, as categorised by the internationally accepted Greenhouse Gas Protocol (see box). "We'll prioritise areas where we believe there are significant opportunities for us to reduce CO<sub>2</sub> emissions. Working closely with our largest suppliers will be vital, to find out how they're reducing emissions and if there's scope for improvement," she says.

While indirect emissions are a relatively new area for Novo Nordisk, the company is already working with key suppliers of raw materials to promote energy efficiency and the use of renewable energy.

From recent analyses, Novo Nordisk has also acquired a good understanding of two other types of indirect emission: business flights and leased company cars, and, according to Dorethe Nielsen, is planning initiatives to reduce emissions from these sources. For the other categories, the focus will initially be on getting solid data based on which decisions about CO<sub>2</sub> reduction initiatives can be made.

Jakob Riis, executive vice president, is the chairman of Novo Nordisk's Social & Environmental Committee. He explains the rationale for the broader scope of the company's environmental strategy: "While we'll continue to challenge ourselves and improve in the areas of energy and water consumption, waste reduction and direct carbon emissions, we're ready to broaden the scope of our responsibility to include indirect CO<sub>2</sub> emissions. With overwhelming scientific evidence of the increased rate and impact of climate change, we simply must set ourselves ambitious targets in this area," he says.

"Which indicators to use for measuring performance is a tricky matter," he acknowledges. "With all our plants soon using renewable energy for power, it's impossible to keep lowering CO<sub>2</sub> emissions in absolute terms when our company is growing as much as it is. We have concluded that the best way to measure our CO<sub>2</sub> performance is to measure CO<sub>2</sub> emissions relative to the number of patients treated with our products, or CO<sub>2</sub> emissions per treated patient if you will. Our ambition is to bring that number down."



# MANAGING RISKS

The pharmaceutical industry is associated with potentially serious risks that investors should keep in mind when making investment decisions. Novo Nordisk is no exception.

Effective enterprise risk management is all about identifying risks early, assessing them accurately and taking action to mitigate them so that they will not prevent the company from achieving its business objectives. Sounds easy, but of course it is more complicated in reality. Fact is that a well-functioning risk management process is key to ensuring Novo Nordisk's long-term business success because risks are everywhere and some of them can cause serious damage if managed poorly.

In the pharmaceutical industry, most risks fall into one of these seven categories listed on the notepad. And while Novo Nordisk's overall risk profile—the consolidated assessment of all the risks facing Novo Nordisk—seldom changes significantly from year to year, individual risks do.

Jesper Brandgaard, Novo Nordisk's chief financial officer, heads the company's Risk Management Board. As an example of a risk that has increased in both likelihood and potential impact during 2015, he cites pressure on Novo Nordisk's modern insulin prices in China, which is likely to grow in 2016 due to a new bidding reform which was implemented in June 2015.

Asked about risks that have become smaller during the year, Jesper Brandgaard mentions a regulatory risk associated with Tresiba®. "When we entered the year, we did not know whether the USFDA would approve Tresiba® based on interim data from the DEVOTE study. When it turned out that they did, we could remove that risk from our risk grid." At the same time, he stresses that the final result of the DEVOTE study will not be known before the second half of 2016.

As another example, he mentions a specific legal risk, the product liability lawsuits in the US targeting incretin-based products, including Vic toza®. In November, a federal judge handling most of the cases dismissed the cases against Novo Nordisk and other pharmaceutical companies. Although the ruling has been appealed, this means the likelihood of a significant financial impact from these cases has been reduced.

The following is an overview of the seven main types of risk that Novo Nordisk faces.

## DELAYS OR FAILURE OF PIPELINE PRODUCTS

Development of a new pharmaceutical product is an expensive undertaking that can take more than 10 years. It includes extensive non-clinical tests and clinical trials as well as an elaborate regulatory approval process, including approval of the production facilities. During the process, various hurdles may delay the development of a potential product candidate and add substantial expenses. In some cases, significant obstacles could lead to the company eventually deciding to abandon the development of the potential product candidate. Data from the pharmaceutical industry indicate that there is a less than 35% likelihood of a biologic diabetes product candidate in phase 1 ultimately being approved for marketing, while the likelihood of success is around 60% for products in phase 2, rising to around 80% for products in phase 3. However, there is significant uncertainty regarding the timing and success of the regulatory approval process.

## MARKET RISKS

The principal market risks Novo Nordisk experiences are:

- Price pressure and reimbursement restrictions by payers
- The launch of new products by established competitors
- Increased competition from producers of biosimilar medicines.

Europe, China and the US are all main markets for Novo Nordisk where payers—both governments and private payers—take measures to limit spending on medicines, typically by driving down prices, demanding higher rebates and/or restricting access to and reimbursement of products. This is unlikely to change in the foreseeable future. For Novo Nordisk, reimbursement restrictions pose a significant risk when launching a new product such as Tresiba®. Despite the patient benefits and data supporting the health-economic benefit of this new basal insulin, it is not always possible to obtain market access under what Novo Nordisk considers reasonable conditions. In some countries, the company may therefore decide not to launch Tresiba® or other new products unless conditions change.

New products from established or new competitors are another inherent market risk. In the basal insulin segment, a competitor launched a biosimilar version of the best-selling modern insulin product in some markets in 2015 and is likely to launch in the US by the end of 2016. How and to what extent these events will change the market dynamics is difficult to assess at present. In addition to these global risks, in some countries in the International Operations region, political instability or armed conflicts may pose a risk to Novo Nordisk's business for varying lengths of time.

## SUPPLY DISRUPTIONS

Failure or breakdown at one of Novo Nordisk's or the company's key suppliers' vital production facilities could adversely affect business operations and potentially cause employee injuries or infrastructure damage. Mitigating actions include measures to prevent and respond to fires, annual inspections, back-up facilities and safety inventories. To reduce supply risks and optimise costs and logistics, Novo Nordisk has established production sites in several countries.

## QUALITY AND PRODUCT SAFETY ISSUES

Quality and product safety issues may arise if, for example, a production facility is not continuously in regulatory compliance, a product is not within specifications or side effects that were not detected in clinical trials become apparent when a product is used for longer periods of time. Novo Nordisk proactively manages such risk through its quality



management system, a key priority of which is to safeguard product quality and minimise risks to patient safety. The quality management system aims to ensure that the company is in compliance with all regulatory requirements. It includes standard operating procedures, quality and release controls, quality audits, quality improvement plans and systematic senior management reviews.

#### FINANCIAL RISKS

Novo Nordisk's main financial risks relate to exchange rates and tax disputes. Novo Nordisk's reporting currency and the functional currency of corporate operations is the Danish krone, which is closely linked to the euro within a narrow range of  $\pm 2.25\%$ . However, the majority of the company's sales are in US dollars, Chinese yuan, Japanese yen and British pounds. Exchange rate risk is therefore the company's biggest financial risk, and the risk has grown in importance as the size of international markets and the share of sales in different currencies have increased. To manage this risk, the company hedges expected future cash flows for selected key currencies. Read more about how Novo Nordisk manages this risk in notes **4.2** and **4.3** on pp **81–84**.

In the course of conducting business globally, transfer pricing disputes with tax authorities may occur. Novo Nordisk's policy is to pursue a competitive tax level, meaning around the average for the company's peer group, in a responsible way. This means paying relevant taxes in jurisdictions where its business activity generates profits. As a general rule, Novo Nordisk's affiliates pay corporate taxes in the countries in which they operate. To manage uncertainties regarding tax, Novo Nordisk has negotiated multi-year transfer pricing agreements with tax authorities in key markets. Read more about the taxes paid by Novo Nordisk in 2015 in note **2.6** on pp **70–71**.

#### INFORMATION TECHNOLOGY RISKS

Well-functioning IT systems are critical for Novo Nordisk's ability to operate effectively. Furthermore, they hold confidential information that, if disclosed, could have a severe impact on Novo Nordisk's competitive situation. An information security strategy is in place to mitigate the risk of intruders causing damage to systems and gaining access to critical data and systems. Specific measures include awareness campaigns, access controls, and intrusion detection and prevention systems.

#### BUSINESS ETHICS AND LEGAL RISKS

Business ethics violations, patent and contract disputes are the main risks in this area. The pharmaceutical industry is tightly regulated in many respects, including what promotional claims it can make about its products and how it can interact with doctors and other healthcare professionals.

In the US, Novo Nordisk settled two civil cases with the US Department of Justice in June 2011 regarding alleged improper marketing of NovoSeven®. As part of the settlement, Novo Nordisk's US affiliate entered into a five-year Corporate Integrity Agreement with the Office of the Inspector General of the US Department of Health and Human Services. Under that agreement, the US affiliate added additional reporting and other procedures to its already robust compliance programme. Read more about these and other pending litigations against Novo Nordisk and investigations involving the company in note **3.7** on pp **78**.

DELAYS OR FAILURE OF  
PIPELINE PRODUCTS

MARKET RISKS

SUPPLY DISRUPTIONS

QUALITY AND PRODUCT  
SAFETY ISSUES

FINANCIAL RISKS

IT RISKS

BUSINESS ETHICS AND  
LEGAL RISKS

The case mentioned above underlines the potential business ethics or legal risks associated with being a pharmaceutical company. To minimise the risk of violating national and international regulations, Novo Nordisk has, over the past decade, strengthened its global and regional business ethics compliance programmes.

Novo Nordisk's business model is based on developing new, innovative products, and when the company makes significant new inventions, it will typically seek to patent them. Intellectual property risks occur if, for example, a government does not recognise the validity of patents or is unable to uphold patent rights, or if a competitor infringes a Novo Nordisk patent or challenges its validity.

### NOVO NORDISK'S RISK MANAGEMENT POLICY

In Novo Nordisk we will proactively manage risk to ensure continued growth of our business and to protect our people, assets and reputation. This means that we will:

- utilise an effective and integrated risk management system while maintaining business flexibility
- identify and assess material risks associated with our business
- monitor, manage and mitigate risks.

Read more about Novo Nordisk's risk management process at [novonordisk.com/about\\_us](http://novonordisk.com/about_us).



# SHARES

## AND CAPITAL STRUCTURE

Through open and proactive communication, the company seeks to provide the basis for fair and efficient pricing of its shares.

### SHARE CAPITAL AND OWNERSHIP

Novo Nordisk's total share capital of DKK 520,000,000 is divided into an A share capital of nominally DKK 107,487,200 and a B share capital of nominally DKK 412,512,800. The company's A shares are not listed and are held by Novo A/S, a Danish public limited liability company wholly owned by the Novo Nordisk Foundation. The Foundation has a dual objective: to provide a stable basis for the commercial and research activities conducted by the companies within the Novo Group (of which Novo Nordisk is the largest), and to support scientific and humanitarian purposes. According to the Articles of Association of the Foundation, the A shares cannot be vested. As of 31 December 2015, Novo A/S also held nominal value of DKK 32,762,800 of B share capital. Novo Nordisk's B shares are listed on Nasdaq Copenhagen and on the New York Stock Exchange as American Depositary Receipts (ADRs). Novo Nordisk's A and B shares are calculated in units of DKK 0.20. Each A share carries 200 votes and each B share carries 20 votes. As Novo Nordisk's B shares are in bearer form, no complete record of all shareholders exists. Based on available sources of information about the company's shareholders as of 31 December 2015, it is estimated that shares were geographically distributed as shown in the chart on the opposite page. As of 31 December 2015, the free float of listed B shares was 89.5% (of which approximately 13.1% are listed as ADRs), excluding the Novo A/S holding and Novo Nordisk's holding of treasury shares which, as of 31 December 2015, was DKK 10,433,741 nominally. For details about the share capital, see note 4.1 on pp 79–80.

### CAPITAL STRUCTURE AND DIVIDEND POLICY

Novo Nordisk's Board of Directors and Executive Management consider that the current capital and share structure of Novo Nordisk serves the interests of the shareholders and the company well, providing strategic flexibility to pursue Novo Nordisk's vision. Novo Nordisk's capital structure strategy offers a good balance between long-term shareholder value creation and competitive shareholder return in the short term. Novo Nordisk's guiding principle is that any excess capital, after the funding of organic growth opportunities and potential acquisitions, should be returned to investors. The company's dividend policy applies a pharma-

ceutical industry benchmark to ensure a competitive payout ratio for dividend payments, which are complemented by share repurchase programmes. The Board of Directors plan to introduce an interim dividend in August, 2016. As illustrated on the right, Novo Nordisk has continuously increased both the payout ratio and the dividend paid over the last five years. The dividend for 2014 recorded in March 2015 was equal to DKK 5.00 per A and B share of DKK 0.20 as well as for ADRs. This corresponds to a payout ratio of 48.7%, which is broadly in line with the 2014 pharma peer group average of 54%. For 2015, the Board of Directors will propose a dividend of DKK 6.40, which corresponds to a payout ratio of 46.6%. Adjusting for the partial divestment of NNIT A/S, where the net profit impact was returned to shareholders through a DKK 2.5 billion expansion of the 2015 share repurchase programme, the payout ratio will be 50.1%. Novo Nordisk does not pay a dividend on its holding of treasury shares. Shareholders' enquiries concerning dividend payments and shareholder accounts should be addressed to Investor Service. Read more on the back cover.

During the 12-month period beginning 30 January 2015, Novo Nordisk repurchased shares worth DKK 17.5 billion. Since 2008, the share repurchase programme has primarily been conducted in accordance with the provisions of European Commission Regulation No 2273/2003 of 22 December 2003 (also known as the Safe Harbour Regulation). In such a programme, financial institutions are appointed as lead managers to execute the repurchases independently and without influence from Novo Nordisk.

### SHARE REPURCHASE PROGRAMME FOR 2016/2017

For the next 12 months, Novo Nordisk has decided to implement a new share repurchase programme. The expected total repurchase value of B shares amounts to a cash value of up to DKK 14 billion. Novo Nordisk expects to implement the majority of the new share repurchase programme according to the Safe Harbour Regulation. The size of the 2016 share repurchase programme is adjusted for the impact of the interim dividend. In March 2016, at the Annual General Meeting, the Board of Directors will propose a further reduction in the company's B share capital, corresponding

to approximately 1.92% of the total share capital, by cancelling 50,000,000 treasury shares. After the implementation of the share capital reduction, Novo Nordisk's share capital will amount to DKK 510,000,000, divided into A share capital of DKK 107,487,200 and B share capital of DKK 402,512,800.

### SHARE PRICE DEVELOPMENT

Novo Nordisk's share price increased by 54% between its 2014 close of DKK 260.3 and the 30 December 2015 close of DKK 399.9. For comparison, the Danish OMX C20 CAP stock index increased by 29% and the pharma peer group increased by 4% during 2015. The increase in Novo Nordisk's share price during 2015 reflects its sustained leadership position in the growing diabetes care market, coupled with a continued improvement in operating margins and the progress of key R&D projects, including the approval of Tresiba\* in the US and the clinical progress with the novel GLP-1 analogue semaglutide. The total market value of Novo Nordisk's B shares, excluding treasury shares, was DKK 80.4 billion as of 30 December 2015.

### COMMUNICATION WITH SHAREHOLDERS

To keep investors updated about performance and the progress of clinical development programmes, Novo Nordisk hosts conference calls with Executive Management following key events and the release of financial results. Executive Management and Investor Relations also travel extensively to ensure that all investors with a major holding of Novo Nordisk shares can meet with the company on a regular basis and that a number of other investors and potential investors also have access to the company's Management and Investor Relations.

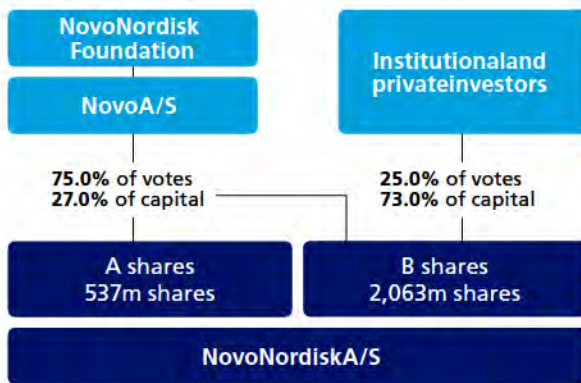
### ANALYST COVERAGE

Novo Nordisk is currently covered by 37 sell-side analysts, including the major global investment banks that regularly produce research reports on Novo Nordisk. A list of analysts covering Novo Nordisk can be found at [novonordisk.com](http://novonordisk.com) under 'Investors'. Company announcements from 1995 onwards, financial, social and environmental results, a calendar of investor-relevant events, investor presentations, background information and so on are also available.



## SHARE AND OWNERSHIP STRUCTURE

### OWNERSHIP STRUCTURE

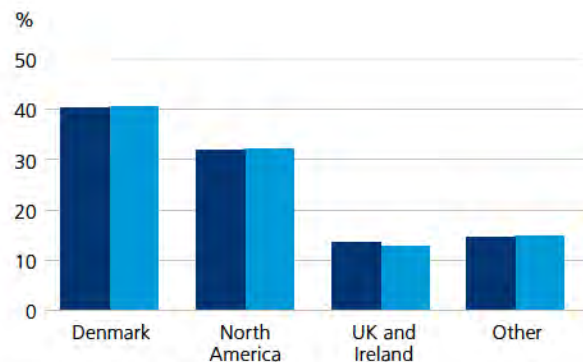


Note: Treasury shares are included in share capital but have no voting right.

### GEOGRAPHIC DISTRIBUTION OF SHAREHOLDERS \*

% of share capital

■ 2014 ■ 2015



\* Calculated using shareholders' registered home countries.

## SHARE PRICE PERFORMANCE

### SHARE PRICE PERFORMANCE

Novo Nordisk share price and indexed peers

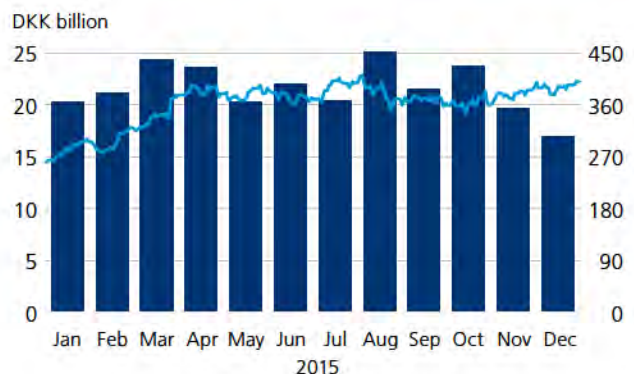
— Novo Nordisk — Pharmaceutical industry peers\* — OMXC20 CAP



\* Pharma peers comprise: AstraZeneca, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, J&J, Merck & Co, Novartis, Pfizer, Roche, Sanofi and Teva.

### PRICE DEVELOPMENT AND MONTHLY TURNOVER OF NOVONORDISK B SHARES

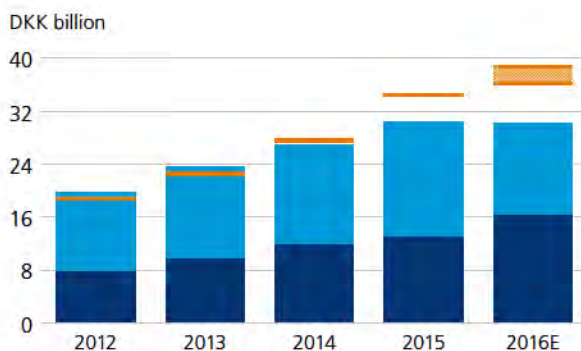
■ Turnover of B shares (left) — Novo Nordisk's B share closing prices (right)



## CASH RETURN TO SHAREHOLDERS

### ANNUAL CASH RETURN TO SHAREHOLDERS

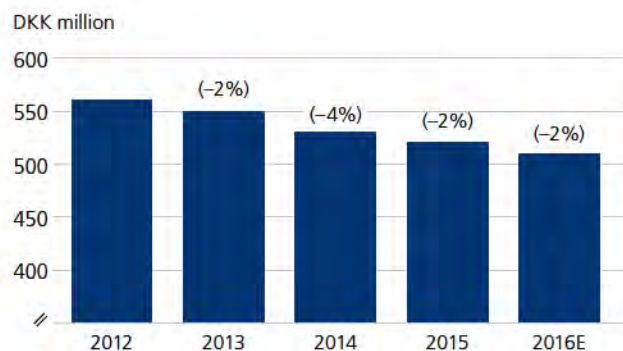
■ Dividend ■ Share repurchase — Free cash flow



Note: Dividends are allocated to the year of dividend pay.

### DEVELOPMENT IN SHARE CAPITAL

■ Share capital





# CORPORATE GOVERNANCE

In 2015, the Board of Directors reached its diversity targets set out in 2013 and consequently increased its diversity ambition even further by setting out new targets for 2019. The Board of Directors established a Remuneration Committee to enhance the process for preparing proposals for the remuneration of the Board of Directors and Executive Management. Furthermore, the Board of Directors decided to reorganise Executive Management to enhance the Board's visibility of Novo Nordisk's international business operations and support further development of key leadership talents.

## GOVERNANCE STRUCTURE

### SHAREHOLDERS

Shareholders have ultimate authority over the company and exercise their rights to make decisions at general meetings. Resolutions can generally be passed by a simple majority. However, resolutions to amend the Articles of Association require two-thirds of votes cast and capital represented, unless other adoption requirements are imposed by the Danish Companies Act.

At the annual general meeting, shareholders approve the annual report and any amendments to the company's Articles of Association. Shareholders also elect board members and the independent auditor.

Novo Nordisk's share capital is divided into A and B shares. Special rights attached to A shares include pre-emptive subscription rights in the event of an increase in the A share capital and pre-emptive purchase rights in the event of a sale of A shares, while B shares take priority for liquidation proceedings.\* Read more about shares and capital structure on [p 44](#).

### BOARD OF DIRECTORS

Novo Nordisk has a two-tier management structure consisting of the Board of Directors and Executive Management. The two bodies are separate and no one serves as a member of both. The Board of Directors determines the company's overall strategy and follows up on its implementation, supervises the performance, ensures adequate management and organisation and, as such, actively contributes to developing the company as a focused, sustainable, global pharmaceutical company. The Board of Directors supervises Executive Management in its decisions and operations. The Board of Directors may also issue new shares or buy back shares in accordance with authorisations granted by the annual general meeting and recorded in the meeting minutes. For minutes from annual general meetings,

see [novonordisk.com/about\\_us](https://novonordisk.com/about_us). The Board of Directors has 12 members, eight of whom are elected by shareholders and four by employees in Denmark. Novo Nordisk's Board of Directors met seven times during 2015.

Shareholder-elected board members serve a one-year term and may be re-elected. Members must retire at the first annual general meeting after reaching the age of 70. Five of the eight shareholder-elected board members are independent as defined by the Danish Corporate Governance Recommendations. Read more on [pp 52-53](#).

A proposal for nomination of board members is presented by the Nomination Committee to the Board of Directors, taking into account required competences as defined by the Board of Directors' competence profile and reflecting

\* A share takes priority for dividends below 0.5%. B shares take priority for dividends between 0.5 and 5%. However, in practice, A shares and B shares receive the same amount of dividend per share. The dividend per share approved at the Annual General Meeting in March 2015 was DKK 5 for all shares of DKK 0.20, equivalent to a dividend percentage of 2,500%, making the dividend differentiation in the Articles of Association less relevant.



the result of a self-assessment process facilitated by internal or external consultants. The assessment process is based on written questionnaires and evaluates the Board of Directors' composition and the skill sets of its members, including whether each board member and executive participates actively in board discussions and contributes with independent judgement.

To ensure that discussions include multiple perspectives representing the complex, global pharmaceutical environment, the Board of Directors aspires to be diverse in gender and nationality. Currently, three shareholder-elected board members are female and six of the eight shareholder-elected board members are non-Danes. In 2015, the Board of Directors increased its diversity ambition further and set out new targets with the aim that by 2019 it will consist of at least two shareholder-elected board members with Nordic nationality and at least two shareholder-elected board members with a nationality other than Nordic – and at least four shareholder-elected board members of each gender. In accordance with section 99b of the Danish Financial Statements Act, Novo Nordisk discloses its diversity policy, targets and current performance in the UN Global Compact Communication on Progress, which is available at [novonordisk.com/annualreport](http://novonordisk.com/annualreport).

This self-assessment conducted in 2015 was facilitated internally and revealed continued strong performance by the Board and Executive Management. The process also resulted in the identification of a number of areas within research, manufacturing and sales where more insight will be provided to the Board. In order to support continued fulfilment of the Novo Nordisk Way, criteria for board members include integrity, accountability, fairness, financial literacy, commitment and desire for innovation. Members are also expected to have experience of managing major companies that develop, manufacture and market products and services globally. The competence profile, which includes the nomination criteria, is available at [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

General Meeting re-elected the Chairman, Göran Ando, and the Vice Chairman, Jeppe Christiansen. See [novonordisk.com/about\\_us](http://novonordisk.com/about_us) for a report on the Chairmanship's activities.

#### AUDIT COMMITTEE

The four members of the Audit Committee are elected by the Board of Directors from among its members. Pursuant to the US Securities Exchange Act, two members qualify as independent while two members rely on an exemption to the independence requirements. In addition, two members have been designated as financial experts as defined by the US Securities and Exchange Commission (SEC). Under Danish law, two members qualify as independent – of whom one also qualifies as financial expert. One member is an employee representative. The Audit Committee assists the Board of Directors with oversight of the external auditors, the internal audit function, the procedure for handling complaints regarding accounting, internal accounting controls, auditing or financial reporting matters and business ethics matters, financial, social and environmental reporting, business ethics compliance, post-completion reviews and post-investment reviews, long-term incentive programmes and information security. In 2015, the Board of Directors selected Liz Hewitt as Chairman and Jeppe Christiansen, Sylvie Grégoire and Stig Strøbæk as members. Eivind Kolding was selected as an observer on the Audit Committee. See [novonordisk.com/about\\_us](http://novonordisk.com/about_us) for a report on the Audit Committee's activities.

#### NOMINATION COMMITTEE

The Nomination Committee consists of five members. Three members qualify as independent, while one member is an employee representative. The Nomination Committee assists the Board with oversight of the competence profile and composition of the Board, nomination of members and committees, and other tasks on an ad hoc basis as specifically decided by the Board. In 2015, the Board of Directors selected Göran Ando as Chairman and Bruno Angelici, Liz Hewitt, Liselotte

Under Danish law, Novo Nordisk's employees in Denmark are entitled to be represented by half of the total number of board members elected at the annual general meeting. In 2014, employees elected four board members from among themselves – two male and two female, all Danes. Board members elected by employees serve a four-year term and have the same rights, duties and responsibilities as shareholder-elected board members.

#### CHAIRMANSHIP

The annual general meeting directly elects the chairman and the vice chairman of the Board of Directors. The Chairmanship carries out administrative tasks, such as planning board meetings to ensure a balance between overall strategy-setting and financial and managerial supervision of the company. Other tasks include reviewing the fixed asset investment portfolio. In March 2015, the Annual

Hyveled and Mary Szela as members. See [novonordisk.com/about\\_us](http://novonordisk.com/about_us) for a report on the Nomination Committee's activities.

#### REMUNERATION COMMITTEE

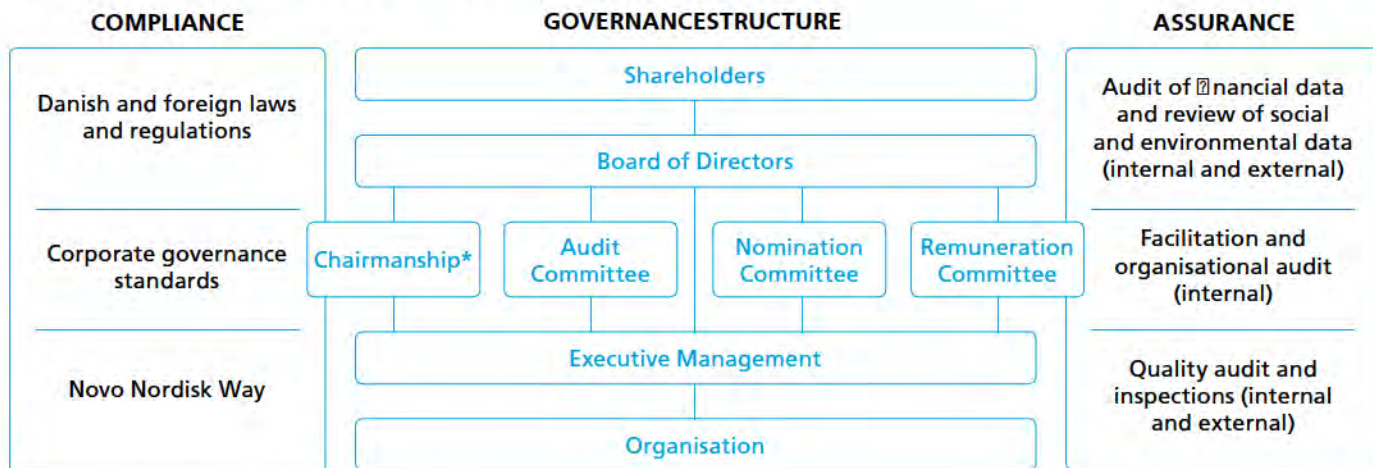
The Board of Directors established a Remuneration Committee in 2015. The Remuneration Committee consists of five members. Two members qualify as independent, while one member is an employee representative. The chairman of the committee is not independent. The Remuneration Committee assists the Board with oversight of the remuneration policy as well as the actual remuneration of board members, its committees and Executive Management. In 2015, the Board of Directors elected Göran Ando as Chairman and Jeppe Christiansen, Thomas Paul Koestler, Søren Thuesen Pedersen and Mary Szela as members. See [novonordisk.com/about\\_us](http://novonordisk.com/about_us) for a report on the Remuneration Committee's activities.



**EXECUTIVE MANAGEMENT**

Executive Management is responsible for the day-to-day management of the company. In 2015, one executive left and four executives were appointed by the Board of Directors. The four new executives were elevated from leaders of the commercial activities in the US, Europe and International Operations and of Product Supply to executive vice presidents and members of Executive Management. The four new executives are not registered with the Danish Business Authority. Executive Management now consists of the president & CEO, plus eight executives. They are responsible for the overall conduct of the

business and all operational matters, the organisation of the company, allocation of resources, determination and implementation of strategies and policies, direction-setting, and ensuring timely reporting and provision of information to the Board of Directors and Novo Nordisk's stakeholders. Executive Management meets at least once a month and often more frequently. The Board of Directors appoints members of Executive Management and determines its remuneration. The Chairmanship reviews the performance of the executives.

**CORPORATE GOVERNANCE CODES AND PRACTICES**

\*The Chairmanship is directly elected by the annual general meeting.

**ASSURANCE**

The company's financial reporting and the internal controls over financial reporting processes are audited by an independent audit firm elected at the annual general meeting. As part of Novo Nordisk's commitment to its social and environmental responsibility, the company voluntarily includes an assurance report for social and environmental reporting in the annual report. The assurance provider reviews whether the social and environmental performance information covers aspects deemed to be material, and verifies the internal control processes for the information reported.

Novo Nordisk's internal audit function provides independent and objective assurance, primarily within internal control of financial processes, IT and business ethics. To ensure that the internal financial audit function works independently of Executive Management, its charter, audit plan and budget are approved by the Audit Committee.

Three other types of assurance activity—quality audits, organisational audits and values audits, called facilitations—help ensure that the company adheres to high quality standards and operates in accordance with the Novo Nordisk Way.

**COMPLIANCE WITH CORPORATE GOVERNANCE CODES**

Novo Nordisk's B shares are listed on Nasdaq Copenhagen and on the New York Stock Exchange (NYSE) as American Depositary Receipts (ADRs). The applicable corporate governance codes for each stock exchange and a review of Novo Nordisk's compliance are available at [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

In accordance with section 107b of the Danish Financial Statements Act, Novo Nordisk discloses its mandatory corporate governance report at [novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html](http://novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html). Novo Nordisk adheres to all but the following recommendations:

- The responsibility for the remuneration policy applicable to the employees generally lies with Executive Management and not with the Remuneration Committee.
- Three employment contracts for Executive Management entered into before 2008 allow for severance payments of more than 24 months' fixed base salary plus pension contribution.
- The majority of the Audit Committee's members and the Remuneration Committee's members respectively are not independent.

Novo Nordisk complies with the corporate governance standards of NYSE applicable to foreign listed private issuers. As a controlled company, Novo Nordisk is not obliged to comply with all the standards established by NYSE. Furthermore, Novo Nordisk, as a foreign private issuer, is permitted to follow home country practice, which is the case in relation to independence requirements, audit committee, equity compensation plans, code of business conduct and ethics, and CEO certification. A summary of the significant ways in which Novo Nordisk's corporate governance practices differ from the NYSE corporate governance listing standards can be found in the corporate governance report at [novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html](http://novonordisk.com/about-novo-nordisk/corporate-governance/Recommendations-and-practices.html).

Novo Nordisk is part of the Novo Group and adheres to the Charter for Companies in the Novo Group, which is available at [novo.dk](http://novo.dk). However, all strategic and operational matters are solely decided by the Board of Directors and Executive Management of Novo Nordisk.



# REMUNERATION

At the Annual General Meeting in March 2015, the fixed base fee of the Board of Directors was increased from DKK 500,000 to DKK 600,000 after not having been adjusted for four years.

Remuneration of the Board of Directors and Executive Management is assessed on an annual basis against a benchmark of Nordic companies as well as European pharmaceutical companies that are similar to Novo Nordisk in size, complexity and market capitalisation. The results are presented to the Board of Directors by the Remuneration Committee at its October meeting. The company strives for simplicity when devising the remuneration package, and its remuneration principles provide guidance for the remuneration of the Board of Directors and Executive Management. These principles are available at [novonordisk.com/about-novo-nordisk/corporate-governance/remuneration.html](http://novonordisk.com/about-novo-nordisk/corporate-governance/remuneration.html).

## BOARD OF DIRECTORS' REMUNERATION

The remuneration of Novo Nordisk's Board of Directors comprises a fixed base fee, a multiplier of the fixed base fee for the Chairmanship and members of the company's committees, fees for ad hoc tasks and a travel allowance. Further information on the remuneration of the Board of Directors is available at [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

At the October meeting, the Board of Directors agrees on recommendations for remuneration levels for the next financial year. In connection with the approval of the annual report, the Board endorses the actual remuneration for the past financial year and the recommendation on remuneration levels for the current financial year. These are then presented to the annual general meeting for approval.

## TRAVEL AND EXPENSES

All board members who reside outside of Denmark are paid a fixed travel allowance for each board meeting. Expenses such as travel and accommodation in relation to board meetings as well as those associated with continuing education are reimbursed. Novo Nordisk also pays social security taxes imposed by foreign authorities. Further information on travel and expenses is available at [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

## EXECUTIVE MANAGEMENT'S REMUNERATION

The remuneration of Novo Nordisk's Executive Management is proposed by the Remuneration Committee and approved by the Board of Directors. Remuneration packages for executives comprise a fixed base salary, a cash-based incentive, a share-based incentive, a pension contribution and other

benefits. For executives on international assignments, the remuneration package is generally based on an equalised host country net salary during the length of the assignment and relocation benefits including accommodation and school arrangements. The split between fixed and variable remuneration is intended to result in a reasonable part of the salary being linked to performance, while promoting sound, long-term business decisions to meet the company's objectives. All incentives are subject to claw-back if it is subsequently determined that payment was based on information that was manifestly misstated.

## FIXED BASE SALARY

The fixed base salary is intended to attract and retain executives with the professional and personal competences required to drive the company's performance.

## CASH-BASED INCENTIVE

The short-term cash-based incentive is designed to incentivise individual performance. The incentive is dependent on the achievement of a number of predefined short-term financial, process, people and customer targets relating to the executive's functional area and linked to goals in the company's Balanced Scorecard as well as the achievement of a number of personal

CONTINUED ►

## BOARD OF DIRECTORS

IN 2015, THE BASE FEE FOR MEMBERS OF THE BOARD OF DIRECTORS WAS DKK 600,000 (DKK 500,000 IN 2014).

DKK million	2015				2014			
	Fixed base fee	Fee for ad hoc tasks and committee work	Travel allowance	Total	Fixed base fee	Fee for ad hoc tasks and committee work	Travel allowance	Total
Göran Ando <sup>3,4</sup> (BC, NC and RC)	1.7	–	0.1	1.8	1.5	–	0.1	1.6
Jeppe Christiansen (BV, AM and RM)	1.2	0.3	–	1.5	1.0	–	–	1.0
Bruno Angelici (NM)	0.6	0.1	0.1	0.8	0.5	0.1	0.1	0.7
Sylvie Grégoire <sup>1</sup> (AM)	0.5	0.2	0.2	0.9	–	–	–	–
Liz Hewitt (AC and NM)	0.6	0.7	0.1	1.4	0.5	0.4	0.1	1.0
Liselotte Hyveled <sup>1</sup> (NM)	0.6	0.1	–	0.7	0.4	–	–	0.4
Thomas Paul Koestler (RM)	0.6	0.1	0.2	0.9	0.5	–	0.3	0.8
Eivind Kolding <sup>1</sup> (AO)	0.5	–	–	0.5	–	–	–	–
Anne Marie Kverneland	0.6	–	–	0.6	0.5	–	–	0.5
Søren Thuesen Pedersen (RM)	0.6	0.1	–	0.7	0.5	0.1	–	0.6
Stig Strøbæk (AM)	0.6	0.3	–	0.9	0.5	0.3	–	0.8
Mary Szela <sup>1</sup> (NM and RM)	0.5	0.2	0.2	0.9	–	–	–	–
Helge Lund <sup>2</sup>	0.1	0.1	0.1	0.3	0.4	0.2	0.1	0.7
Hannu Ryöppönen <sup>2</sup>	0.1	0.1	0.1	0.3	0.5	0.5	0.1	1.1
Henrik Gürtler <sup>2</sup>	–	–	–	–	0.1	–	–	0.1
Ulrik Hjulmand-Lassen <sup>2</sup>	–	–	–	–	0.1	–	–	0.1
<b>Total</b>	<b>8.8</b>	<b>2.3</b>	<b>1.1</b>	<b>12.2<sup>5</sup></b>	<b>7.0</b>	<b>1.6</b>	<b>0.8</b>	<b>9.4<sup>5</sup></b>

BC = Board chairman, BV = Board vice chairman, AC = Audit Committee chairman, AM = Audit Committee member, AO = Audit Committee observer, NC = Nomination Committee chairman, NM = Nomination Committee member, RC = Remuneration Committee chairman, RM = Remuneration Committee member.

1. Liselotte Hyveled was first elected in March 2014. Sylvie Grégoire, Eivind Kolding and Mary Szela were first elected in March 2015. 2. Helge Lund and Hannu Ryöppönen resigned as of March 2015. Henrik Gürtler and Ulrik Hjulmand-Lassen resigned as of March 2014. 3. Novo Nordisk provides secretarial assistance to the chairman in Denmark and the UK. 4. As Göran Ando also holds the position of chairman of the Board, he has not received a fee as chairman of the Nomination Committee and the Remuneration Committee. 5. Excluding social security taxes paid by Novo Nordisk amounting to less than DKK 1 million (less than DKK 1 million in 2014).



targets relating to the individual executive and their position. Short-term targets for the Chief Executive Officer are set by the Chairman of the Board of Directors, while the targets for the other members of Executive Management are set by the CEO. The Chairmanship evaluates the degree of achievement for each member of Executive Management, based on input from the CEO.

In June 2015, the Board of Directors determined that the 2015 maximum bonus would be a maximum of 12 months' fixed base salary plus pension contribution for the CEO, a maximum of eight-and-a-half months' fixed base salary plus pension contribution for executives on international assignments and a maximum of eight months' fixed base salary plus pension contribution for the remaining members of Executive Management based in Denmark.

#### SHARE-BASED INCENTIVES

The long-term share-based incentive programme is designed to promote the collective performance of Executive Management and align the interests of executives and shareholders. Share-based incentives are linked to both financial and non-financial targets. The long-term incentive programme is based on a calculation of economic value creation compared with planned performance. In line with Novo Nordisk's long-term financial targets, the calculation of economic value creation is based on reported operating profit after tax, reduced by a weighted average cost of capital-based return requirement on average invested capital.

To a large extent, the sales growth drives the financial development of the company and hence economic value creation. The economic value created can thus be adjusted in a negative direction if the sales performance is lower than budgeted sales. The calculated economic value creation is further adjusted if certain non-financial targets are not met. Non-financial targets are determined on the basis of an assessment of the objectives regarded as particularly important for the fulfilment of the company's long-term performance. Besides financial and sales growth targets, the 2015 targets consisted of 16 targets linked to the company's Balanced Scorecard within the categories of research and development, quality, patients, employees, environment and reputation. Targets within research and development were related to specific milestones, such as submission of product files to the regulatory authorities in the US and Europe within a certain time frame, achievement of marketing authorisations, execution of trials and a defined number of product candidates to enter development from discovery. Targets within quality related to recalls and warning letters, and targets within environment related to the emission of CO<sub>2</sub> from energy consumption for production. Based on these principles, a proportion of the calculated economic value creation is allo-

cated to a joint pool for the participants, who include Executive Management and other members of the Senior Management Board.

In March 2015, the Board of Directors determined that the 2015 maximum for Executive Management as per 1 March 2015 would be 12 months' fixed base salary including pension contribution for the CEO and up to nine months' fixed base salary plus pension contribution for the other members of Executive Management. If the targets are met for economic value creation and sales growth, and at least 85% performance is reached for non-financial targets, the allocation to the joint pool would correspond to six months' base salary plus pension contribution for the CEO and four-and-a-half months' base salary plus pension contribution for the other members of Executive Management. Further information on Novo Nordisk's share-based incentives is available at [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

#### PENSION

Pension contributions are paid to enable executives to build up an income for retirement.

#### OTHER BENEFITS

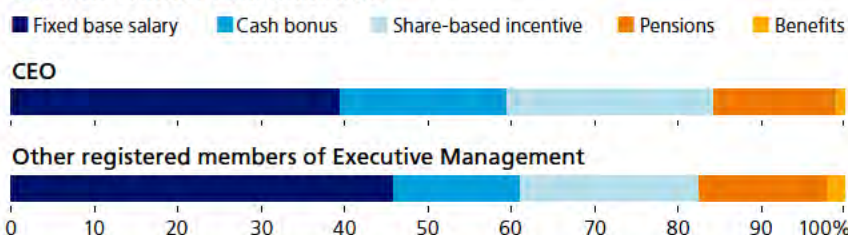
Other benefits are added to ensure that overall remuneration is competitive and aligned with local practices.

#### SEVERANCE PAYMENT

Novo Nordisk may terminate employment by giving executives 12 months' notice. Executives may terminate their employment by giving Novo Nordisk six months' notice. In addition to the notice period, executives are entitled to a severance payment as described in the overview of the composition of executive remuneration. Further information on Novo Nordisk severance payment is available at [novonordisk.com/about\\_us](http://novonordisk.com/about_us).

## COMPOSITION OF EXECUTIVE REMUNERATION

### 2015 ON-TARGET PERFORMANCE



## REMUNERATION PACKAGE COMPONENTS

Remuneration	Board of Directors	Executive Management	Comments relating to Executive Management
Fixed fee/base salary	✓	✓	Accounts for approximately 25–50% of the total value of the remuneration package.*
Fee for committee work	✓	✗	
Fee for ad hoc tasks	✓	✗	
Cash-based incentive	✗	✓	Up to eight-and-a-half months' fixed base salary + pension per year for executives on international assignments. 8–12 months' fixed base salary + pension per year for executives based in Denmark.
Share-based incentive	✗	✓	9–12 months' fixed base salary incl pension per year.**
Pensions	✗	✓	25% of fixed base salary and cash-based incentive.
Travel allowance and other expenses	✓	✓	Executive Management receives a minor travel allowance equal to that of all other employees.
Benefits	✗	✓	Executive Management receives non-monetary benefits, such as company cars, phones, etc. Executives on international assignments may receive relocation benefits.
Severance payment	✗	✓	Up to 24 months' fixed base salary + pension. Three employment contracts entered into before 2008 exceed the 24-month limit, though will not exceed 36 months' fixed base salary plus pension contribution.

\* The interval 25–50% states the span between 'maximum performance' and 'on-target performance'.

\*\* Executives as per 1 March 2015.



## 2015 PERFORMANCE TRIGGERS MAXIMUM SHARE ALLOCATION

In 2015, Novo Nordisk exceeded the planned target for economic value creation by more than the 10% incentive threshold. Sales growth in local currencies was realised at 8.4%, thereby also exceeding the incentive target, while the threshold for the achievement of non-financial targets was met. Together, this means that participants in the share-based long-term incentive programme will receive the maximum share allocation.

## REMUNERATION OF EXECUTIVE MANAGEMENT AND OTHER MEMBERS OF THE SENIOR MANAGEMENT BOARD

DKK million	2015						2014					
	Fixed base salary <sup>5</sup>	Cash bonus	Pension	Benefits	Share-based incentive <sup>6</sup>	Total	Fixed base salary <sup>5</sup>	Cash bonus	Pension	Benefits	Share-based incentive <sup>6</sup>	Total
<b>Executive Management</b>												
Lars Rebie Sørensen	10.6	10.6	5.3	0.3	–	26.8	10.4	9.5	5.0	0.3	–	25.2
Jesper Brandgaard	6.0	4.0	2.5	0.3	–	12.8	5.8	3.9	2.5	0.3	–	12.5
Lars Fruergaard Jørgensen	5.2	3.5	2.2	0.3	–	11.2	4.4	2.2	1.6	0.3	–	8.5
Jakob Riis	5.2	2.8	2.0	0.3	–	10.3	4.4	1.8	1.5	0.3	–	8.0
Mads Krogsgaard Thomsen	6.0	4.0	2.5	0.3	–	12.8	5.8	3.9	2.5	0.3	–	12.5
Non-registered members of Executive Management <sup>1,2</sup>	13.8	12.0	6.2	0.8	–	32.8	–	–	–	–	–	–
Retired members of Executive Management:												
Kåre Schultz <sup>3</sup>	2.5	1.3	1.0	0.1	–	4.9	7.3	4.3	3.1	0.3	–	15.0
Lise Kingo <sup>3</sup>	–	–	–	–	–	–	4.8	2.0	1.7	0.3	–	8.8
Share-based incentive	–	–	–	–	44.0	44.0	–	–	–	–	27.3	27.3
<b>Executive Management in total</b>	<b>49.3<sup>5</sup></b>	<b>38.2</b>	<b>21.7</b>	<b>2.4</b>	<b>44.0</b>	<b>155.6</b>	<b>42.9<sup>5</sup></b>	<b>27.6</b>	<b>17.9</b>	<b>2.1</b>	<b>27.3</b>	<b>117.8</b>
<b>Other members of the Senior Management Board in total<sup>4</sup></b>	<b>73.1<sup>5</sup></b>	<b>20.6</b>	<b>22.2</b>	<b>18.3</b>	<b>47.8</b>	<b>172.0</b>	<b>80.6<sup>5</sup></b>	<b>28.7</b>	<b>21.9</b>	<b>21.6</b>	<b>38.9</b>	<b>191.7</b>

1. Effective 30 April 2015 Novo Nordisk's Executive Management was expanded to include four new members: Maziar Mike Doustdar, Jerzy Gruhn, Jesper Høiland and Henrik Wulff, none of whom are registered with the Danish Business Authority as members of Executive Management of Novo Nordisk A/S. Respective amounts in the table include remuneration for May to December 2015, with the exception of cash bonus, which covers the full year. 2. Amounts include taxes paid by Novo Nordisk due to the members' international employment terms. In addition, Maziar Mike Doustdar, Jerzy Gruhn and Jesper Høiland received benefits in 2015 in accordance with Novo Nordisk's International Assignment Guidelines, such as accommodation, children's school fees, international health insurance and other types of insurance, spouse allowance and tax-filing support, all offered net of tax to the assignees. Including tax paid by Novo Nordisk, the benefits received in 2015 not included in the above table amount to DKK 5.4 million. 3. Following a change in the distribution of responsibilities among the members of Executive Management, President and COO Kåre Schultz left Novo Nordisk as of April 2015. The remuneration of Kåre Schultz up to April 2015 is included in the above table, whereas severance payment, including participation in the share-based incentive programme for 2015 and part of 2016, of DKK 72.7 million is not included. The remuneration of Lise Kingo for 2014 is also included in the above table, whereas severance payment, including participation in the share-based incentive programme for 2015, of DKK 32.2 million is not included. 4. The total remuneration for 2015 includes remuneration of 34 Senior Vice Presidents (31 in 2014), three of whom have retired or left the company (none in 2014). The 2015 remuneration for the retired Senior Vice Presidents is included in the table above, whereas severance payments of DKK 26 million are not included. 5. Excluding social security taxes paid amounting to DKK 1.3 million (DKK 0.0 million in 2014) for Executive Management and DKK 1.4 million (DKK 2.7 million in 2014) for other members of the Senior Management Board. 6. The joint pool of shares is locked up for three years before it is transferred to the participants employed at the end of the three-year period. The value is the cash amount of the share bonus granted in the year using the grant-date market value of Novo Nordisk B shares. During the lock-up period, the joint pool may potentially be reduced in the event of lower-than-planned value creation in subsequent years. The split between Executive Management and other members is based on the split of participants at the time of the establishment of the pool.

## MANAGEMENT'S LONG-TERM INCENTIVE PROGRAMME

The shares allocated to the joint pool for 2012 (487,730 shares) were released to the individual participants subsequent to the approval of the Annual Report 2015 by the Board of Directors and the announcement on 3 February 2016 of the full-year financial results for 2015. Based on the share price at the end of 2015, the value of the released shares is as follows:

Value as at 31 December 2015 of shares released on 3 February 2016	Number of shares	Market value <sup>1</sup> (DKK million)
<b>Executive Management</b>		
Lars Rebie Sørensen	41,110	16.4
Jesper Brandgaard	27,335	10.9
Lars Fruergaard Jørgensen	13,665	5.5
Jakob Riis	13,665	5.5
Mads Krogsgaard Thomsen	27,335	10.9
Non-registered members of Executive Management <sup>2</sup>	40,995	16.4
<b>Executive Management in total<sup>3</sup></b>	<b>164,105</b>	<b>65.6</b>
<b>Other members of the Senior Management Board in total<sup>3</sup></b>	<b>176,530</b>	<b>70.6</b>

1. The market value of the shares released in February 2016 is based on the Novo Nordisk B share price of DKK 399.90 at the end of 2015. 2. Including members of Executive Management not registered with the Danish Business Authority. In addition, 4,000 shares were released to a non-registered member of Executive Management not part of the joint pool for 2012 for the Senior Management Board. 3. In addition, 147,095 shares (market value: DKK 58.8 million) were released to retired Executive Management and Senior Management Board members.

Lars Rebie Sørensen serves as a member of the Supervisory Board of Bertelsmann AG, from which he received remuneration of EUR 31,897 until May 2015 (EUR 117,000 in 2014); as a board member of Thermo Fisher Scientific Inc, from which he received remuneration of USD 223,865 until May 2015 (USD 299,063 in 2014); and as a board member of Carlsberg A/S, from which he received remuneration of DKK 838,306 as of March 2015. Jesper Brandgaard serves as chairman of the Board of Directors of SimCorp A/S, from which he received remuneration of DKK 730,488 in 2015, including share-based payment for Q1 2015 (DKK 913,500 in 2014, including share-based payment for the full year); and as chairman of the board of NNIT A/S, from which he received remuneration of DKK 562,500 as of March 2015 following the IPO of NNIT A/S (DKK 0 in 2014). The remuneration received from NNIT A/S is part of the remuneration of Executive Management presented above. Mads Krogsgaard Thomsen serves as a board member of the University of Copenhagen, from which he received remuneration of DKK 81,606 in 2015 (DKK 81,200 in 2014). Jakob Riis serves as a board member of ALK-Abelló A/S, from which he received remuneration of DKK 415,000 in 2015 (DKK 375,000 in 2014). Henrik Wulff serves as a board member of AMBU A/S as of December 2015 but did not receive remuneration in 2015.



# BOARD OF DIRECTORS

**GÖRAN  
ANDO**



Formerly CEO of Celltech Group plc, UK (retired). Member of the Board of Novo Nordisk A/S since 2005, vice chair since 2006, chair since 2013, chair of the Nomination Committee since 2013 and chair of the Remuneration Committee since 2015.

**Management duties:** Symphogen A/S, Denmark (chair), member of the boards of Novo A/S, Denmark, Molecular Partners AG, Switzerland, EUSA Pharma Ltd., UK, and ICMEC, US. Senior advisor to Essex Woodlands Health Ventures Ltd., UK.

**Special competences:** Medical qualifications and extensive executive background within the international pharmaceutical industry.

**Education:** Specialism in general medicine (1978) and degree in medicine (1973), both from Linköping Medical University, Sweden.

**JEPPE  
CHRISTIANSEN**



Chief executive officer of Fondsmæglerselskabet Maj Invest A/S, Denmark. Member and vice chair of the Board of Novo Nordisk A/S since 2013. Member of the Remuneration Committee and Audit Committee since 2015.

**Management duties:** Haldor Topsøe A/S (vice chair), member of the boards of Novo A/S, KIRKBI A/S and Symphogen A/S, all in Denmark.

**Special competences:** Extensive background and experience within the financial sector, in particular in relation to financial and capital market issues, as well as insight into the investor perspective.

**Education:** MSc in Economics (1985) from the University of Copenhagen, Denmark.

**BRUNO  
ANGELICI**



Formerly executive vice president of AstraZeneca (retired). Member of the Board of Novo Nordisk A/S since 2011 and member of the Nomination Committee since 2013.

**Management duties:** Vectura Group plc (chair), member of the boards of Smiths Group plc, UK, and Wolters Kluwer, the Netherlands. Member of the Global Advisory Board of Takeda Pharmaceutical Company Limited, Japan.

**Special competences:** Extensive global experience with two companies in the fields of pharmaceuticals and medical devices, and in-depth knowledge of strategy, sales, marketing and governance of major companies.

**Education:** AMP (1993) from Harvard Business School and MBA (1978) from Kellogg School of Management at Northwestern University, both in the US.

**SYLVIE  
GRÉGOIRE**



Formerly president of Human Genetic Therapies, Shire plc, US and Switzerland (retired). Member of the Board of Novo Nordisk A/S and the Audit Committee since 2015.

**Management duties:** Member of the boards of Galenica AG, Switzerland and Perkin Elmer Inc., US. Chairman of the strategic committee of Tarix Orphan LLC., US. Advisor to the financial and biotech community.

**Special competences:** In-depth knowledge of the regulatory environment in both the US and the EU, having experience of all phases of the product life cycle, including discovery, registration, pre-launch and managing the life cycle while on the market. In addition, she has financial insight from i.a. P&L responsibility.

**Education:** Pharmacy Doctorate degree (1986) from the State University of NY at Buffalo, US, BA in Pharmacy (1984) from Laval University, Canada, and Science College degree (1980) from Séminaire de Sherbrooke, Canada.

**LIZ  
HEWITT**



Formerly Group Director Corporate Affairs of Smith & Nephew plc, UK (retired). Member of the Board of Novo Nordisk A/S since 2012, chair of the Audit Committee since 2015 (member since 2012) and member of the Nomination Committee since 2013.

**Management duties:** Member of the board and chair of the audit committee of Savills plc, and member of the board and chair of the nomination committee of Melrose Industries plc, both in the UK. Senior external member of the audit committee of the House of Lords, UK.

**Special competences:** Extensive experience within the field of medical devices, significant financial knowledge and knowledge of how large international companies operate.

**Education:** BSc (Econ) (Hons) (1977) from University College London, UK, and FCA (UK Institute of Chartered Accountants) (1982).

**LISELOTTE  
HYVELED**



Project vice president for Novo Nordisk's mealtime insulin projects faster-acting insulin aspart and liver-preferential mealtime insulin in Global Development. Member of the Board of Novo Nordisk A/S since 2014 and member of the Nomination Committee since 2015.

**Education:** Master of Science (1992) from Copenhagen University, and Master of Medical Business Strategies (2011) from Copenhagen Business School, both in Denmark.

Name (male/female)	First elected	Term	Nationality	Born	Independence <sup>1</sup>
Göran Ando (m)	2005	2016	Swedish	March 1949	Not independent <sup>2</sup>
Jeppe Christiansen (m)	2013	2016	Danish	November 1959	Not independent <sup>2,4</sup>
Bruno Angelici (m)	2011	2016	French	April 1947	Independent
Sylvie Grégoire (f)	2015	2016	Canadian/American	November 1961	Independent <sup>1,5</sup>
Liz Hewitt (f)	2012	2016	British	November 1956	Independent <sup>1,5</sup>
Liselotte Hyveled (f)	2014	2018	Danish	January 1966	Not independent <sup>1</sup>

1. As designated by Nasdaq Copenhagen in accordance with section 3.2.1 of Recommendations on Corporate Governance (updated 2014). 2. Member of Management or the Board of Novo A/S.  
3. Elected by employees of Novo Nordisk.



**THOMAS  
PAUL  
KOESTLER**

Executive with Vatera Holdings LLC, US. Member of the Board of Novo Nordisk A/S since 2011 and member of the Remuneration Committee since 2015.

**Management duties:** Melinta Therapeutics Inc., US (chair). Member of the boards of Momenta Pharmaceuticals Inc., ImmusanT Inc., Arisaph Pharmaceuticals Inc. and Edgemont Pharmaceuticals LLC, all in the US.

**Special competences:** Extensive R&D knowledge, both generally and within the field of regulatory affairs. Significant know-how about the pharmaceutical industry in general and how large international corporations operate. Additional knowledge of the US market.

**Education:** PhD in Medicine & Pathology (1982) from the Roswell Park Memorial Institute and BSc in Biology (1975) from Daemen College, both in the US.

**EIVIND  
KOLDING**

CEO of Novo A/S, Denmark. Member of the Board of Novo Nordisk A/S and observer on the Audit Committee since 2015.

**Management duties:** Member of the boards of NNIT A/S and the Sonion Group, both in Denmark.

**Special competences:** Extensive executive experience in large multinational companies headquartered in Denmark within regulated markets, and significant financial knowledge.

**Education:** AMP (1994) from Wharton Business School, US, and Master of Law (1983) from the University of Copenhagen, Denmark.

**ANNE MARIE  
KVERNELAND**

Laboratory technician and union representative. Member of the Board of Novo Nordisk A/S since 2000.

**Management duties:** Member of the Novo Nordisk Foundation since 2014.

**Education:** Degree in Medical Laboratory Technology (1980) from Copenhagen University Hospital, Denmark.

**SØREN  
THUESEN  
PEDERSEN**

External Affairs director in Quality Intelligence. Member of the Board of Novo Nordisk A/S since 2006 and member of the Remuneration Committee since 2015.

**Management duties:** Member of the boards of HOFOR A/S, HOFOR Forsyning Holding PS, HOFOR Forsyning Komplementar A/S and HOFOR Forsyning A/S (Copenhagen Utilities), all in Denmark.

**Education:** BSc in Chemical Engineering (1988) from the Engineering Academy of Denmark.

**STIG  
STRØBÆK**

Electrician and union representative. Member of the Board of Novo Nordisk A/S since 1998 and member of the Audit Committee since 2013.

**Education:** Qualified electrician. Diploma in further training for board members (2003) from the Danish Employees' Capital Pension Fund (LD).

**MARY  
SZEŁA**

CEO of Aegerion Pharmaceuticals, Inc., US. Member of the Board of Novo Nordisk A/S, the Remuneration Committee and the Nomination Committee since 2015. Member of the boards of Coherus Biosciences, Inc., Receptos Pharmaceuticals, Inc., Suneva Medical, Inc. and Aegerion Pharmaceuticals, Inc., all in the US.

**Management duties:** Member of the boards of Coherus Biosciences, Inc., Receptos Pharmaceuticals, Inc. and Suneva Medical Inc., all in the US.

**Special competences:** In-depth understanding of the clinical, regulatory and marketing aspects of the pharmaceutical industry in North America, having both operational and strategic experience.

**Education:** MBA (1991) from the University of Illinois at Chicago, US, and a BSc nursing degree (1985) from the University of Illinois at Chicago, US.

Name (male/female)	First elected	Term	Nationality	Born	Independence <sup>1</sup>
Thomas Paul Koestler (m)	2011	2016	American	June 1951	Independent
Eivind Kolding (m)	2015	2016	Danish	November 1959	Not independent <sup>2</sup>
Anne Marie Kverneland (f)	2000	2018	Danish	July 1956	Not independent <sup>2</sup>
Søren Thuesen Pedersen (m)	2006	2018	Danish	December 1964	Not independent <sup>2</sup>
Stig Strøbæk (m)	1998	2018	Danish	January 1964	Not independent <sup>2,4</sup>
Mary Szeła (f)	2015	2016	American	May 1963	Independent

4. Pursuant to the US Securities Exchange Act, Ms Hewitt and Ms Grégoire qualify as independent Audit Committee members while Mr Christiansen and Mr Strøbæk rely on an exemption to the independence requirements. 5. Ms Hewitt and Ms Grégoire qualify as independent Audit Committee members as defined under part 8 of the Danish Act on Approved Auditors and Audit firms.



# EXECUTIVE MANAGEMENT

## LARS REBIEN SØRENSEN

President and chief executive officer (CEO)



Lars Rebien Sørensen joined Novo Nordisk's Enzymes Marketing in 1982. He was appointed president and chief executive officer in November 2000.

**Other management duties:** Vice chair of the board of Carlsberg A/S, Denmark.

**Born:** October 1954.

## JESPER BRANDGAARD

Executive vice president and chief financial officer (CFO)



Jesper Brandgaard joined Novo Nordisk in 1999 as senior vice president of Corporate Finance. He was appointed executive vice president and chief financial officer in November 2000.

**Other management duties:** Chair of the boards of SimCorp A/S and NNIT A/S, both in Denmark.

**Born:** October 1963.

## MAZIAR MIKE DOUSTDAR\*

Executive vice president, International Operations



Maziar Mike Doustdar joined Novo Nordisk in 1992 as an office clerk in Vienna, Austria. He was appointed senior vice president of International Operations in 2013, and in April 2015 he was appointed executive vice president with responsibility for International Operations.

**Born:** August 1970.

## JERZY GRUHN\*

Executive vice president, Europe



Jerzy Gruhn joined Novo Nordisk in 1996 as National Sales Manager in Poland. He was appointed senior vice president of Europe in 2013, and in April 2015 he was appointed executive vice president with responsibility for Europe.

**Born:** June 1963.

## JESPER HØILAND\*

Executive vice president, US



Jesper Høiland joined Novo Nordisk in 1987 as assistant area manager for the US, Canada, Australia and New Zealand. He was appointed senior vice president of North America in 2013, and in April 2015 he was appointed executive vice president with responsibility for the US.

**Born:** September 1960.

## LARS FRUERGAARD JØRGENSEN

Executive vice president and chief of staff



Lars Fruergaard Jørgensen joined Novo Nordisk in 1991 as an economist. He was appointed executive vice president for IT, Quality & Corporate Development in January 2013, and in November 2014 he took over the responsibilities for Corporate People & Organisation and Business Assurance.

**Other management duties:** Chair of the board of NNE Pharmaplan A/S, Denmark.

**Born:** November 1966.

## JAKOB RIIS

Executive vice president, China, Pacific & Marketing



Jakob Riis joined Novo Nordisk in 1996 as a health economist in Marketing. He was appointed senior vice president for Marketing in 2005. In January 2013, he was appointed executive vice president and in 2015 he took over responsibility for sales in the China and Pacific regions.

**Other management duties:** Chair of the board of Copenhagen Institute of Interaction Design and member of the board and chair of the audit committee of ALK-Abelló A/S, both in Denmark.

**Born:** April 1966.

## MADS KROGSGAARD THOMSEN

Executive vice president, chief science officer (CSO)



Mads Krogsgaard Thomsen joined Novo Nordisk in 1991 as head of Growth Hormone Research. He was appointed senior vice president of Diabetes R&D in 1994 and executive vice president and chief science officer in November 2000.

**Other management duties:** Chair of the board of Steno Diabetes Center A/S and vice chair of the board of the University of Copenhagen, both in Denmark.

**Born:** December 1960.

## HENRIK WULFF\*

Executive vice president, Product Supply



Henrik Wulff joined Novo Nordisk in 1998 as a chemist. He was appointed senior vice president of Product Supply in 2013, and in April 2015 he was appointed executive vice president of Product Supply.

**Other management duties:** Chair of the board of NN Pharmatech A/S and member of the boards of NNE Pharmaplan A/S and Ambu A/S, all in Denmark.

**Born:** November 1970.

\* Not registered with the Danish Business Authority as member of Executive Management of Novo Nordisk A/S.



# CONSOLIDATED FINANCIAL, SOCIAL AND ENVIRONMENTAL STATEMENTS 2015

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## CONSOLIDATED ENVIRONMENTAL STATEMENT (SUPPLEMENTARY INFORMATION)

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Novo Nordisk remains committed to report its performance through its integrated reporting. In line with the Novo Nordisk Triple Bottom Line principle, the Consolidated financial, social and environmental statements are presented along with the related notes.

Within each of the financial, social and environmental statements, the notes are grouped into sections based on how Novo Nordisk views its business. Each of the sections has an introduction explaining the link between long-term targets and business priorities, and how this is reflected in Novo Nordisk's financial, social and environmental statements. To provide transparency in the disclosed amounts, each note includes the relevant accounting policy, key accounting estimates and numerical disclosure.



# INCOME STATEMENT

## AND STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER

DKK million	Note	2015	2014	2013
<b>INCOME STATEMENT</b>				
Net sales	2.1, 2.2	107,927	88,806	83,572
Cost of goods sold	2.2	16,188	14,562	14,140
Gross profit		91,739	74,244	69,432
Sales and distribution costs	2.2	28,312	23,223	23,380
Research and development costs	2.2, 2.3	13,608	13,762	11,733
Administrative costs	2.2	3,857	3,537	3,508
Other operating income, net	2.2, 2.5	3,482	770	682
– Non-recurring income from the partial divestment of NNIT A/S	2.5	2,376	–	–
Operating profit		49,444	34,492	31,493
Financial income	4.9	85	167	1,702
Financial expenses	4.9	6,046	563	656
Profit before income taxes		43,483	34,096	32,539
Income taxes	2.6	8,623	7,615	7,355
<b>Net profit for the year</b>		<b>34,860</b>	<b>26,481</b>	<b>25,184</b>
<b>EARNINGS PER SHARE</b>				
Basic earnings per share (DKK)	4.1	13.56	10.10	9.40
Diluted earnings per share (DKK)	4.1	13.52	10.07	9.35

DKK million	Note	2015	2014	2013
<b>STATEMENT OF COMPREHENSIVE INCOME</b>				
Net profit for the year		34,860	26,481	25,184
<b>Other comprehensive income:</b>				
Exchange rate adjustments of investments in subsidiaries		(669)	(39)	(435)
Cash flow hedges, realisation of previously deferred (gains)/losses	4.3	2,216	(1,229)	(809)
Cash flow hedges, deferred gains/(losses) incurred during the period	4.3	(681)	(2,225)	1,195
Other items		366	111	75
Items that will be reclassified subsequently to the Income statement when specific conditions are met		1,232	(3,382)	26
Remeasurements of defined benefit plans	3.5	(37)	(247)	54
Items that will not subsequently be reclassified to the Income statement		(37)	(247)	54
Other comprehensive income before tax		1,195	(3,629)	80
Tax on other comprehensive income, income/(expense)	2.6	(87)	977	(211)
<b>Other comprehensive income for the year, net of tax</b>		<b>1,108</b>	<b>(2,652)</b>	<b>(131)</b>
<b>Total comprehensive income for the year</b>		<b>35,968</b>	<b>23,829</b>	<b>25,053</b>



# BALANCE SHEET

AT 31 DECEMBER

DKK million		Note	2015	2014
<b>ASSETS</b>				
Intangible assets	3.1		2,158	1,378
Property, plant and equipment	3.2		25,545	23,136
Investment in associated company	4.8		81	—
Deferred income tax assets	2.6		6,806	5,399
Other financial assets	4.7		1,339	856
<b>Total non-current assets</b>			<b>36,659</b>	<b>30,769</b>
Inventories	3.3		12,758	11,357
Trade receivables	3.4		15,485	13,041
Tax receivables			3,871	3,210
Other receivables and prepayments	4.7		2,257	2,750
Marketable securities	4.2, 4.4, 4.7		3,542	1,509
Derivative financial instruments	4.2, 4.3, 4.7		304	30
Cash at bank and on hand	4.2, 4.4		16,923	14,396
<b>Total current assets</b>			<b>55,140</b>	<b>46,293</b>
<b>Total assets</b>			<b>91,799</b>	<b>77,062</b>
<b>EQUITY AND LIABILITIES</b>				
Share capital	4.1		520	530
Treasury shares	4.1		(10)	(11)
Retained earnings			46,816	41,277
Other reserves			(357)	(1,502)
<b>Total equity</b>			<b>46,969</b>	<b>40,294</b>
Deferred income tax liabilities	2.6		6	7
Retirement benefit obligations	3.5		1,186	1,031
Provisions	3.6		2,765	2,041
<b>Total non-current liabilities</b>			<b>3,957</b>	<b>3,079</b>
Current debt	4.4, 4.7		1,073	720
Trade payables	4.7		4,927	4,950
Tax payables			3,777	2,771
Other liabilities	3.7, 4.7		12,655	11,051
Derivative financial instruments	4.2, 4.3, 4.7		1,382	2,607
Provisions	3.6		17,059	11,590
<b>Total current liabilities</b>			<b>40,873</b>	<b>33,689</b>
<b>Total liabilities</b>			<b>44,830</b>	<b>36,768</b>
<b>Total equity and liabilities</b>			<b>91,799</b>	<b>77,062</b>



# STATEMENT OF CASH FLOWS

## FOR THE YEAR ENDED 31 DECEMBER

DKK million	Note	2015	2014	2013
<b>Net profit for the year</b>		<b>34,860</b>	26,481	25,184
Adjustment for non-cash items:				
Income taxes in Income statement	2.6	8,623	7,615	7,355
Depreciation, amortisation and impairment losses	3.1, 3.2	2,959	3,435	2,799
Non-recurring income from the partial divestment of NNIT A/S included in 'other operating income'	2.5	(2,526)	–	–
Other non-cash items	4.6	5,908	4,163	584
Change in working capital	4.5	(2,157)	(2,148)	(265)
Interest received		55	131	131
Interest paid		(61)	(78)	(39)
Income taxes paid	2.6	(9,374)	(7,907)	(9,807)
<b>Net cash generated from operating activities</b>		<b>38,287</b>	31,692	25,942
Proceeds from the partial divestment of NNIT A/S	2.5	2,303	–	–
Purchase of intangible assets	3.1	(1,182)	(321)	(403)
Proceeds from sale of property, plant and equipment		15	4	31
Purchase of property, plant and equipment	3.2	(5,224)	(3,990)	(3,238)
Proceeds from sale of other financial assets		32	35	29
Purchase of other financial assets		(9)	(24)	(3)
Sale of marketable securities		1,500	2,232	811
Purchase of marketable securities		(3,533)	–	–
<b>Net cash used in investing activities</b>		<b>(6,098)</b>	(2,064)	(2,773)
Purchase of treasury shares, net	4.1	(17,196)	(14,667)	(13,924)
Dividends paid	4.1	(12,905)	(11,866)	(9,715)
<b>Net cash used in financing activities</b>		<b>(30,101)</b>	(26,533)	(23,639)
<b>Net cash generated from activities</b>		<b>2,088</b>	3,095	(470)
Cash and cash equivalents at the beginning of the year		13,676	10,513	11,053
Exchange gains/(losses) on cash and cash equivalents		86	68	(70)
<b>Cash and cash equivalents at the end of the year</b>	4.4	<b>15,850</b>	13,676	10,513



# STATEMENT OF CHANGES IN EQUITY

AT 31 DECEMBER

DKK million	Share capital	Treasury shares	Retained earnings	Other reserves			Total other reserves	Total
				Exchange rate adjustments	Cash flow hedges	Tax and other items		
<b>2015</b>								
Balance at the beginning of the year	530	(11)	41,277	(248)	(2,221)	967	(1,502)	40,294
Net profit for the year			34,860					34,860
Other comprehensive income for the year			(37)	(669)	1,535	279	1,145	1,108
Total comprehensive income for the year			34,823	(669)	1,535	279	1,145	35,968
<i>Transactions with owners:</i>								
Dividends (note 4.1)			(12,905)					(12,905)
Share-based payments (note 5.1)			442					442
Tax credit related to restricted stock units (note 2.6)			366					366
Purchase of treasury shares (note 4.1)		(10)	(17,219)					(17,229)
Sale of treasury shares (note 4.1)		1	32					33
Reduction of the B share capital (note 4.1)	(10)	10						-
<b>Balance at the end of the year</b>	<b>520</b>	<b>(10)</b>	<b>46,816</b>	<b>(917)</b>	<b>(686)</b>	<b>1,246</b>	<b>(357)</b>	<b>46,969</b>
<b>2014</b>								
Balance at the beginning of the year	550	(21)	41,137	(209)	1,233	(121)	903	42,569
Net profit for the year			26,481					26,481
Other comprehensive income for the year			(247)	(39)	(3,454)	1,088	(2,405)	(2,652)
Total comprehensive income for the year			26,234	(39)	(3,454)	1,088	(2,405)	23,829
<i>Transactions with owners:</i>								
Dividends (note 4.1)			(11,866)					(11,866)
Share-based payments (note 5.1)			371					371
Tax credit related to restricted stock units (note 2.6)			58					58
Purchase of treasury shares (note 4.1)		(11)	(14,717)					(14,728)
Sale of treasury shares (note 4.1)		1	60					61
Reduction of the B share capital (note 4.1)	(20)	20						-
Balance at the end of the year	530	(11)	41,277	(248)	(2,221)	967	(1,502)	40,294
<b>2013</b>								
Balance at the beginning of the year	560	(17)	39,001	226	847	15	1,088	40,632
Net profit for the year			25,184					25,184
Other comprehensive income for the year			54	(435)	386	(136)	(185)	(131)
Total comprehensive income for the year			25,238	(435)	386	(136)	(185)	25,053
<i>Transactions with owners:</i>								
Dividends (note 4.1)			(9,715)					(9,715)
Share-based payments (note 5.1)			409					409
Tax credit related to restricted stock units (note 2.6)			114					114
Purchase of treasury shares (note 4.1)		(15)	(13,974)					(13,989)
Sale of treasury shares (note 4.1)		1	64					65
Reduction of the B share capital (note 4.1)	(10)	10						-
Balance at the end of the year	550	(21)	41,137	(209)	1,233	(121)	903	42,569



## NOTES SECTIONS IN THE CONSOLIDATED FINANCIAL STATEMENTS

Basis of preparation

Results for the year

Operating assets  
and liabilities

Capital structure and  
financing items

Other disclosures

### SECTION 1 BASIS OF PREPARATION

Read this section to get an overview of the financial accounting policies in general and an overview of Management's key accounting estimates.

- 1.1 Principal accounting policies and key accounting estimates, p 61
- 1.2 Changes in accounting policies and disclosures, p 62
- 1.3 General accounting policies, p 62

### SECTION 2 RESULTS FOR THE YEAR

Read this section to get more details on the results for the year, including operating segments, taxes and employee costs.

- 2.1 Net sales and sales deductions, p 63
- 2.2 Segment information, p 65
- 2.3 Research and development costs, p 68
- 2.4 Employee costs, p 69
- 2.5 Other operating income, net, p 69
- 2.6 Income taxes and deferred income taxes, p 70

### SECTION 3 OPERATING ASSETS AND LIABILITIES

Read this section to get more details on the assets that form the basis for the activities of Novo Nordisk, and the related liabilities.

- 3.1 Intangible assets, p 72
- 3.2 Property, plant and equipment, p 73
- 3.3 Inventories, p 75
- 3.4 Trade receivables, p 75
- 3.5 Retirement benefit obligations, p 76
- 3.6 Provisions and contingent liabilities, p 77
- 3.7 Other liabilities, p 78

### SECTION 4 CAPITAL STRUCTURE AND FINANCING ITEMS

Read this section to gain an insight into the capital structure, cash flow and financing items.

- 4.1 Share capital, distribution to shareholders and earnings per share, p 79
- 4.2 Financial risks, p 81
- 4.3 Derivative financial instruments, p 82
- 4.4 Cash and cash equivalents, financial resources and free cash flow, p 84
- 4.5 Change in working capital, p 84
- 4.6 Other non-cash items, p 85
- 4.7 Financial assets and liabilities, p 85
- 4.8 Investment in associated company, p 87
- 4.9 Financial income and expenses, p 87

### SECTION 5 OTHER DISCLOSURES

Read this section for more details on the statutory notes that have secondary importance from the perspective of Novo Nordisk.

- 5.1 Share-based payment schemes, p 88
- 5.2 Management's holdings of Novo Nordisk shares, p 90
- 5.3 Commitments, p 91
- 5.4 Related party transactions, p 92
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- 5.6 Companies in the Novo Nordisk Group, p 93
- 5.7 Financial definitions, p 94



## SECTION 1 BASIS OF PREPARATION

Basis of preparation

Results for the year

Operating assets  
and liabilitiesCapital structure and  
financing items

Other disclosures

Novo Nordisk presents its Consolidated financial statements on the basis of the latest developments in international financial reporting and strives for early adoption of EU-endorsed IFRS accounting standards. All entities in the Novo Nordisk Group follow the same Group accounting policies. This section gives a summary of the significant accounting policies, Management's key

accounting estimates, new IFRS requirements and other accounting policies in general. A detailed description of accounting policies and key accounting estimates related to specific reported amounts is presented in each note to the relevant financial items.

### 1.1 PRINCIPAL ACCOUNTING POLICIES AND KEY ACCOUNTING ESTIMATES

The Consolidated financial statements included in this Annual Report have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), in accordance with IFRS as endorsed by the European Union and also in accordance with additional Danish disclosure requirements for annual reports of listed companies.

#### Measurement basis

The Consolidated financial statements have been prepared on the historical cost basis except for derivative financial instruments, associated company, equity investments and marketable securities measured at fair value.

The principal accounting policies set out below have been applied consistently in the preparation of the Consolidated financial statements for all the years presented.

#### Principal accounting policies

Novo Nordisk's accounting policies are described in each of the individual notes to the Consolidated financial statements. Considering all the accounting policies applied, Management regards the ones listed in the table below as the most significant accounting policies for the recognition and measurement of reported amounts.

#### Key accounting estimates and judgements

The use of reasonable estimates and judgements is an essential part of the preparation of the Consolidated financial statements. Given the uncertainties inherent in Novo Nordisk's business activities, Management must make certain estimates and judgements that affect the application of accounting policies and reported amounts of assets, liabilities, sales, costs, cash flows and related disclosures at the date(s) of the Consolidated financial statements. The estimates identified are those that have a significant risk of resulting in a material adjustment.

Management bases its estimates on historical experience and various other assumptions that are held to be reasonable under the circumstances. The estimates and underlying assumptions are reviewed on an ongoing basis and, if necessary, changes are recognised in the period in which the estimate is revised. Management considers the carrying amounts recognised in relation to the key accounting estimates mentioned below to be reasonable and appropriate based on currently available information. However, the actual amounts may differ from the amounts estimated as more detailed information becomes available.

Management regards those listed below to be the key accounting estimates and judgements used in the preparation of the Consolidated financial statements.

Please refer to the specific notes for further information on the key accounting estimates and judgements as well as assumptions applied.

Principal accounting policies	Key accounting estimates and judgements	Note
Net sales and sales deductions	Sales deductions – estimate of unsettled obligations	2.1
Research and development	–	2.3, 3.1 and 3.2
Derivative financial instruments	–	4.3
Income taxes and deferred income taxes	Provision for uncertain tax positions, accrual for income taxes and deferred tax assets and liabilities	2.6
Property, plant and equipment including impairment	–	3.2
Inventories	Indirect production costs capitalised	3.3
Trade receivables	Allowance for doubtful trade receivables	3.4
Provisions and contingent liabilities	Provisions for sales rebates and ongoing legal disputes	3.6

#### Applying materiality

The Consolidated financial statements are a result of processing large numbers of transactions and aggregating those transactions into classes according to their nature or function. When aggregated, the transactions are presented in classes of similar items in the Consolidated financial statements. If a line item is not individually material, it is aggregated with other items of a similar nature in the Consolidated financial statements or in the notes.

There are substantial disclosure requirements throughout IFRS. Management provides specific disclosures required by IFRS unless the information is considered immaterial to the economic decision-making of the users of these financial statements or not applicable.



## 1.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

### Adoption of new or amended IFRSs

Based on an assessment of new or amended and revised accounting standards and interpretations ('IFRSs') issued by IASB, and IFRSs endorsed by the European Union effective on or after 1 January 2015, it has been assessed that the application of these new IFRSs has not had a material impact on the Consolidated financial statements in 2015, and Management does not anticipate any significant impact on future periods from the adoption of these new IFRSs.

*New or amended IFRSs that have been issued but have not yet come into effect and have not been early adopted*

In addition to the above, IASB has issued a number of new or amended and revised accounting standards and interpretations that have not yet come into effect. The following standards are in general expected to change current accounting regulation most significantly:

- IASB has issued IFRS 9 'Financial Instruments', with effective date 1 January 2018. It currently awaits EU endorsement. IFRS 9 is part of the IASB's project to replace IAS 39, and the new standard will substantially change the classification and measurement of financial instruments and hedging requirements. Novo Nordisk has assessed the impact of the standard and determined that it will not have any significant impact on the Consolidated financial statements.
- IASB has issued IFRS 15 'Revenue from contracts with customers', with effective date 1 January 2018. It currently awaits EU endorsement. IFRS 15 is part of the convergence project with FASB to replace IAS 18. The new standard will establish a single, comprehensive framework for revenue recognition. Novo Nordisk has completed a preliminary assessment of the impact of the standard and judged that it will not have any significant impact on the Consolidated financial statements.
- IASB has issued IFRS 16 'Leasing' with effective date 1 January 2019. The change in lease accounting requires capitalisation of the majority of the Group's operational lease contracts, representing up to 10% of total assets, which will have an impact on the Group's assets, and a corresponding impact on the liabilities. Hence this will affect the financial ratios related to the balance sheet. The change will have a minor impact on net profit as IFRS 16 requires the lease payments to be split between a depreciation charge included in operating costs and an interest expense on lease liabilities included in finance costs.

## 1.3 GENERAL ACCOUNTING POLICIES

### Principles of consolidation

The Consolidated financial statements incorporate the financial statements of Novo Nordisk A/S and entities controlled by Novo Nordisk A/S. Control exists when Novo Nordisk has effective power over the entity and has the right to variable returns from the entity.

Where necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with Novo Nordisk Group policies. All intra-Group transactions, balances, income and expenses are eliminated in full when consolidated.

The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition and up to the effective date of disposal, as appropriate. Comparative figures are not restated for disposed or acquired companies.

### Translation of foreign currencies

#### Functional and presentation currency

Items included in the financial statements of each of Novo Nordisk's entities are measured using the currency of the primary economic environment in which the entity operates (functional currency). The Consolidated financial statements are presented in Danish kroner (DKK), which is also the functional and presentation currency of the parent company.

#### Translation of transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the transaction dates. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the Income statement.

Translation differences on non-monetary items, such as equity investments classified as financial assets available for sale, are recognised in Other comprehensive income.

#### Translation of Group companies

Financial statements of foreign subsidiaries are translated into Danish kroner at the exchange rates prevailing at the end of the reporting period for balance sheet items, and at average exchange rates for income statement items.

All effects of exchange rate adjustments are recognised in the Income statement, with the exception of exchange rate adjustments of investments in subsidiaries arising from:

- the translation of foreign subsidiaries' net assets at the beginning of the year to the exchange rates at the end of the reporting period
- the translation of foreign subsidiaries' statements of comprehensive income from average exchange rates to the exchange rates at the end of the reporting period
- the translation of non-current intra-Group receivables that are considered to be an addition to net investments in subsidiaries.

These specific exchange rate adjustments are recognised in Other comprehensive income.



## SECTION 2 RESULTS FOR THE YEAR

Basis of preparation

Results for the year

Operating assets and liabilities

Capital structure and financing items

Other disclosures

This section comprises notes related to the results for the year, such as sales including details on gross-to-net sales and segment information, research and development costs, employee costs as well as details on income and deferred income taxes. Consequently, this section provides information related to Novo Nordisk's long-term financial target for growth in operating profit.

Novo Nordisk's growth in sales is a result of continued growth in the number of patients due to the diabetes pandemic, Novo Nordisk's ability to bring innovative products to the market and the global commercial presence of our business.

The growth in operating profit and margin reflects not only growth in sales, but also currency impact and the increase in gross margin primarily driven by a positive product mix due to increased sales of Victoza® and modern insulins. Further, non-recurring income from the divestment of NNIT A/S has affected operating profit positively. There has been a decrease in research and development costs reflecting the discontinuation of activities within inflammatory disorders in 2014.

The article '2015 performance and 2016 outlook' on p 6 includes Management's review of the results for the year.

### Currency fluctuations impact reported sales growth

Currency fluctuations have a direct impact on reported Net sales and reported Operating profit, though impact on Net profit is limited. In 2015, the currency impact on growth in Net sales and Operating profit is an increase of 13% point and 23% point respectively (2% point and 3% point decrease in 2014), compared with growth in local currencies. The impact of currency fluctuations in the key currencies (USD, JPY, CNY, GBP and CAD) is mitigated through hedging contracts, which are included in Financial income and expenses. Hence, reported Net profit is impacted only to a limited degree by key currency fluctuations.

However, hedging is not considered feasible for emerging-market currencies. Consequently, such currency fluctuations have a direct impact on both reported Net sales and Net profit.

Notes 4.2 and 4.3 include information on the foreign exchange risk and a sensitivity analysis for the key currencies.

**107.9**

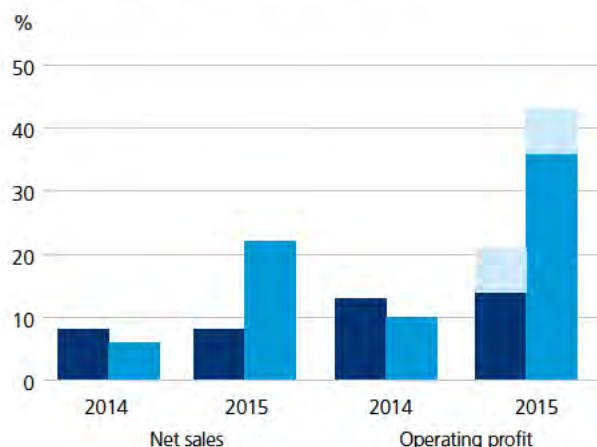
DKK BILLION IN  
NET SALES  
(+22%)

**49.4**

DKK BILLION IN  
OPERATING PROFIT  
(+43%)

### CURRENCY IMPACT ON GROWTH

■ Growth local currencies ■ Growth DKK  
■ Share of growth regarding NNIT A/S divestment



## 2.1 NET SALES AND SALES DEDUCTIONS

### Accounting policies

Revenue from goods sold is recognised when Novo Nordisk has transferred the significant risks and rewards to the buyer, the Group no longer has managerial involvement, and the amount of revenue can be measured reliably.

Sales are measured at the fair value of the consideration received or receivable. When sales are recognised, Novo Nordisk also records estimates for a variety of sales deductions, including product returns as well as rebates and discounts to government agencies, wholesalers, health insurance companies, managed healthcare organisations and retail customers. Sales deductions are recognised as a reduction of gross sales to arrive at net sales. Where contracts contain customer acceptance provisions, Novo Nordisk recognises sales when the acceptance criteria are satisfied.

Revenue recognition for new product launches is based on specific facts and circumstances relating to those products, including estimated demand and acceptance rates for well-established products with similar market characteristics. Where shipments of new products are made on a sale or return basis, without sufficient historical experience for estimating sales returns, revenue is only recorded when there is evidence of consumption or when the right of return has expired.

### Key accounting estimates – Sales deductions

Sales deductions are estimated and provided for at the time the related sales are recorded. These estimates of unsettled obligations require use of judgement, as all conditions are not known at the time of sale, for example total sales volume to a given customer. Provisions for sales rebates are adjusted to actual amounts as rebates and discounts are processed.



## 2.1 NET SALES AND SALES DEDUCTIONS (CONTINUED)

Sales discounts and sales rebates are predominantly issued in Region North America. In addition, political pressure to contain healthcare costs has led several other countries to impose significant price reductions on pharmaceutical products. As such, governments in countries in Region Europe have implemented concerted austerity measures, while government-mandated price cuts have been introduced in Region China, Japan and major countries in Region International Operations.

In the US, significant sales rebates are paid in connection with public healthcare insurance programmes, namely Medicare and Medicaid, as well as rebates to pharmacy benefit managers (PBMs) and managed healthcare plans.

Key customers in the US include private payers, PBMs and government payers. Increasingly, PBMs play a key role in negotiating price concessions with drug manufacturers on behalf of private payers for both the commercial and government channels, and determining the list of drugs covered in the Health Plan's formulary. Specifically, there are two primary drivers:

- Payer pressure to reduce the overall drug costs has resulted in greater focus on negotiating higher rebates from drug manufacturers. Private payers are increasingly keen to adopt narrow formularies that exclude certain drugs, while securing higher rebates from the preferred brand.
- Recent industry consolidation among private payers and PBMs has led to increasing pricing pressure for pharmaceutical companies.

### *US Managed Care and Medicare*

For Managed Care and Medicare, rebates are offered to a number of PBMs and managed healthcare plans. These rebate programmes allow the customer to receive a rebate after attaining certain performance parameters relating to formulary status or pre-established market shares relative to competitors. Rebates are estimated according to the specific terms in each agreement, historical experience, anticipated channel mix, growth rates and market share information. Novo Nordisk adjusts the provision periodically to reflect actual sales performance.

### *US wholesaler charge-backs*

Wholesaler charge-backs relate to contractual arrangements between Novo Nordisk and indirect customers in the US whereby products are sold at contract prices lower than the list price originally charged to wholesalers. A wholesaler charge-back represents the difference between the invoice price to the wholesaler and the indirect customer's contract price. Accruals are calculated for estimated charge-backs using a combination of factors such as historical experience, current wholesaler inventory levels, contract terms and the value of claims received but not yet processed. Wholesaler charge-backs are generally settled within 30 days of the liability being incurred.

### *US Medicaid*

Medicaid is a government insurance programme, and Medicaid rebates have been calculated using a combination of historical experience, product and population growth, price increases, and the impact of contracting strategies. Further, the calculation involves interpretation of relevant regulations that are subject to changes in interpretative guidance from government authorities. Although provisions are made for Medicaid rebates at the time sales are recorded, the actual rebates related to the specific sale will typically be invoiced to Novo Nordisk 6–9 months later. Due to the time lag, the rebate adjustments to sales in any particular period may incorporate adjustments of provisions from prior periods.

### *Discounts, sales returns and other rebates*

Other discounts are provided to wholesalers, hospitals, pharmacies etc, and are usually linked to sales volume or provided as cash discounts. Accruals are calculated based on historical data, and recorded as a reduction in gross sales at the time the related sales are recorded. Sales returns are related to damaged or expired products.

Arrangements with certain healthcare providers may require Novo Nordisk to make refunds to the healthcare providers if anticipated treatment outcomes do not meet predefined targets.

## GROSS-TO-NET SALES RECONCILIATION

DKK million	2015	2014	2013
Gross sales	182,779	131,841	115,906
US Managed Care and Medicare	(33,235)	(17,522)	(12,504)
US wholesaler charge-backs	(22,030)	(12,858)	(10,126)
US Medicaid rebates	(9,838)	(5,578)	(3,851)
Other US discounts and sales returns	(4,685)	(2,972)	(2,063)
Non-US rebates, discounts and sales returns	(5,064)	(4,105)	(3,790)
Total gross-to-net sales adjustments	(74,852)	(43,035)	(32,334)
Net sales	107,927	88,806	83,572

Please refer to note 3.6 for further information on sales-related provisions.



## 2.2 SEGMENT INFORMATION

### Accounting policies

Operating segments are reported in a manner consistent with the internal reporting provided to Executive Management and the Board of Directors.

We consider Executive Management to be the operating decision-making body as all significant decisions regarding business development and direction are taken in that forum.

### Business segments

Novo Nordisk operates in two business segments based on therapies: Diabetes and obesity care and Biopharmaceuticals.

The Diabetes and obesity care business segment includes research, development, manufacturing and marketing of products within the areas of insulin, GLP-1 and related delivery systems, oral antidiabetic products (OAD) and obesity.

The Biopharmaceuticals business segment includes research, development, manufacturing and marketing of products within the areas of haemophilia, growth hormone therapy and hormone replacement therapy. In addition, costs in relation to inflammatory disorders were included in the Biopharmaceuticals business segment in 2014. Please refer to note 2.3.

Segment performance is evaluated on the basis of operating profit consistent with the Consolidated financial statements. Financial income and expenses and income taxes are managed at Group level and are not allocated to business segments. Further, non-recurring income from the partial divestment of NNIT A/S has not been allocated to segments.

There are no sales or other transactions between the business segments. Costs have been split between business segments according to a specific allocation with the addition of a minor number of corporate overhead costs allocated systematically between the segments. Other operating income has been allocated to the two segments based on the same principle. Segment assets comprise the assets that are applied directly to the activities of the segment, including intangible assets, property, plant and equipment, other financial assets, inventories, trade receivables, and other receivables and prepayments.

No operating segments have been aggregated to form the reported business segments.

## BUSINESS SEGMENTS

DKK million	2015	2014	2013	2015	2014	2013	2015	2014	2013
Segment sales	Diabetes and obesity care			Biopharmaceuticals			Total		
New-generation insulin	1,438	658	143						
NovoRapid® / NovoLog®	20,720	17,449	16,848						
NovoMix® / NovoLog® Mix	11,144	9,871	9,759						
Levemir®	18,300	14,217	11,546						
Total modern insulin	50,164	41,537	38,153						
Human insulin	11,231	10,298	10,869						
Victoza®	18,027	13,426	11,633						
Other diabetes and obesity care	4,730	4,061	4,658						
<b>Diabetes and obesity care total sales</b>	<b>85,590</b>	69,980	65,456						
Haemophilia				10,647	9,304	9,266			
Norditropin® (human growth hormone)				7,820	6,506	6,114			
Other biopharmaceuticals				3,870	3,016	2,736			
<b>Biopharmaceuticals total sales</b>				<b>22,337</b>	18,826	18,116			
<b>Segment key figures</b>									
Total net sales	85,590	69,980	65,456	22,337	18,826	18,116	107,927	88,806	83,572
Change in DKK (%)	22.3%	6.9%	7.5%	18.6%	3.9%	5.7%	21.5%	6.3%	7.1%
Change in local currencies (%)	8.9%	8.8%	12.0%	6.3%	6.2%	11.5%	8.4%	8.3%	11.9%
Cost of goods sold	13,725	12,482	11,909	2,463	2,080	2,231	16,188	14,562	14,140
Sales and distribution costs	24,926	20,373	20,584	3,386	2,850	2,796	28,312	23,223	23,380
Research and development costs	10,475	9,318	7,786	3,133	4,444	3,947	13,608	13,762	11,733
Administrative costs	3,051	2,790	2,767	806	747	741	3,857	3,537	3,508
Other operating income, net	488	516	510	618	254	172	1,106	770	682
Income from partial divestment of NNIT A/S (not allocated to segments)	—	—	—	—	—	—	2,376	—	—
<b>Operating profit</b>	<b>33,901</b>	25,533	22,920	<b>13,167</b>	8,959	8,573	<b>49,444</b>	34,492	31,493
Operating margin	39.6%	36.5%	35.0%	58.9%	47.6%	47.3%	45.8%	38.8%	37.7%
Depreciation, amortisation and impairment losses expensed	2,514	2,438	2,209	445	997	590	2,959	3,435	2,799
Additions to Intangible assets and Property, plant and equipment	4,991	3,245	2,651	1,415	1,066	990	6,406	4,311	3,641
Assets allocated to business segments	46,444	40,748	36,436	11,759	10,914	10,525	58,203	51,662	46,961
Non-allocated assets <sup>1</sup>							33,596	25,400	23,376
<b>Total assets</b>							<b>91,799</b>	77,062	70,337

1. The part of total assets that remains unallocated to either of the two business segments includes Investment in associated company, Deferred income tax assets, Other financial assets, Tax receivables, Marketable securities, Derivative financial instruments and Cash at bank and on hand.



## 2.2 SEGMENT INFORMATION (CONTINUED)

### Geographical areas

Novo Nordisk operates in five geographical regions:

- North America: the US and Canada
- Europe: the EU, EFTA, Albania, Bosnia-Herzegovina, Macedonia, Serbia, Montenegro and Kosovo
- Japan & Korea: Japan and South Korea
- Region China: China, Hong Kong and Taiwan
- International Operations: all other countries.

As of 1 January 2016, the geographical regions have been changed to align with management structure. As such, the US will become a separate region, and Canada will join Japan and South Korea to form Region Pacific, together with Australia and New Zealand (previously included in International Operations).

Sales are attributed to geographical regions according to the location of the customer. Allocation of property, plant and equipment, trade receivables, allowance for trade receivables and total assets is based on the location of the assets.

The country of domicile is Denmark, which is part of Region Europe. Denmark is immaterial to Novo Nordisk's activities in terms of geographical size and the operational business segments. More than 99.5% of total sales are realised outside Denmark.

Sales to external customers attributed to the US are collectively the most material to the Group. The US is the only country where sales contribute more than 10% of total sales, and sales to the US represent more than 90% of sales in Region North America.

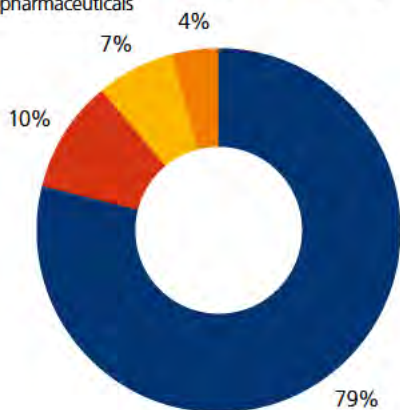
### GEOGRAPHICAL AREAS

DKK million	2015	2014	2013	2015	2014	2013
	■ North America			■ Europe		
Sales by business segment:						
NovoRapid® / NovoLog®	12,576	10,191	9,953	4,239	3,999	3,819
NovoMix® / NovoLog® Mix	2,837	2,483	2,694	2,181	2,317	2,450
Levemir®	13,295	9,386	6,823	2,929	2,939	2,909
Modern insulins (insulin analogues)	28,708	22,060	19,470	9,349	9,255	9,178
Human insulins	2,094	1,997	1,976	2,014	2,222	2,427
Victoza®	13,014	9,046	7,537	3,394	3,130	2,896
Other diabetes and obesity care	1,442	846	1,590	1,225	1,009	885
Diabetes and obesity care total	45,258	33,949	30,573	15,982	15,616	15,386
Haemophilia	5,208	4,449	4,467	2,405	2,189	2,296
Norditropin® (human growth hormone)	3,626	2,750	2,273	1,675	1,654	1,729
Other biopharmaceuticals	2,765	1,975	1,711	736	691	652
Biopharmaceuticals total	11,599	9,174	8,451	4,816	4,534	4,677
<b>Total sales by business and geographical segment</b>	<b>56,857</b>	<b>43,123</b>	<b>39,024</b>	<b>20,798</b>	<b>20,150</b>	<b>20,063</b>
Underlying sales growth in local currencies <sup>1</sup>	10.7%	10.8%	17.8%	1.6%	0.2%	2.5%
Currency effect (local currency impact)	21.1%	(0.3%)	(3.8%)	1.6%	0.2%	(0.7%)
<b>Total sales growth as reported</b>	<b>31.8%</b>	<b>10.5%</b>	<b>14.0%</b>	<b>3.2%</b>	<b>0.4%</b>	<b>1.8%</b>
Property, plant and equipment	3,050	2,215	1,571	19,097	17,411	16,801
Trade receivables	6,618	4,359	3,076	3,856	3,866	3,779
Allowance for doubtful trade receivables	(25)	(20)	(20)	(139)	(194)	(245)
<b>Total assets</b>	<b>12,854</b>	<b>9,131</b>	<b>7,057</b>	<b>65,241</b>	<b>54,526</b>	<b>51,205</b>

1. Additional non-IFRS measure; please refer to p 94 for definition.

### SALES BY BUSINESS SEGMENT

■ Diabetes and obesity care ■ Haemophilia ■ Human growth hormone  
■ Other Biopharmaceuticals



### GROWTH ANALYSIS

Local currencies	Growth	Share of growth
New generation insulin	109%	10%
Modern insulin	7%	41%
Human insulin	(1%)	(1%)
Victoza®	18%	32%
Other diabetes and obesity care	5%	3%
<b>Diabetes and obesity care</b>	<b>9%</b>	<b>85%</b>
Haemophilia	3%	3%
Human growth hormone	8%	7%
Other biopharmaceuticals	13%	5%
<b>Biopharmaceuticals</b>	<b>6%</b>	<b>15%</b>
<b>Total sales</b>	<b>8%</b>	<b>100%</b>



In 2015, Novo Nordisk had three major wholesalers distributing products representing respectively 21%, 12% and 11% of total net sales (18%, 10% and 11% in 2014 and 16%, 11% and 9% in 2013). Net sales to the first two wholesalers are within both diabetes and biopharmaceuticals, whereas the third is only within diabetes.

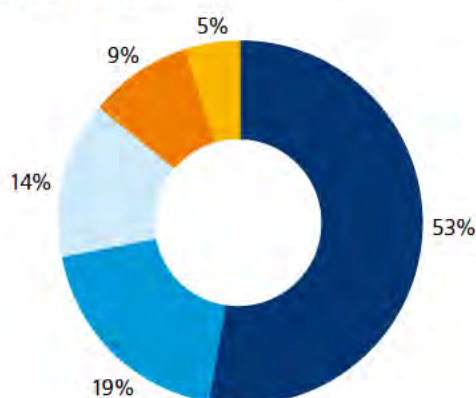
Net sales will be impacted by exchange rate fluctuations, whereas Financial income and Financial expenses will be impacted by the corresponding results of hedging activities. Please refer to notes 4.2, 4.3 and 4.9 for more details on hedging.

For patent expiry in key markets by product, please refer to note 2.5 to the Consolidated social statement.

	2015	2014	2013	2015	2014	2013	2015	2014	2013
	International Operations			Region China			Japan & Korea		
	2,151	1,802	1,639	866	618	486	888	839	951
	2,458	2,077	1,875	3,036	2,338	1,951	632	656	789
	1,473	1,344	1,290	410	334	236	193	214	288
	6,082	5,223	4,804	4,312	3,290	2,673	1,713	1,709	2,028
	3,262	2,660	2,954	3,537	3,051	3,022	324	368	490
	937	799	741	213	171	128	469	280	331
	1,058	820	692	1,594	1,388	1,163	849	656	471
	11,339	9,502	9,191	9,656	7,900	6,986	3,355	3,013	3,320
	2,196	1,893	1,716	195	171	158	643	602	629
	1,165	900	853	15	13	13	1,339	1,189	1,246
	266	245	247	5	4	4	98	101	122
	3,627	3,038	2,816	215	188	175	2,080	1,892	1,997
	14,966	12,540	12,007	9,871	8,088	7,161	5,435	4,905	5,317
	15.4%	14.4%	17.0%	4.1%	13.3%	12.7%	5.3%	(0.8%)	(0.1%)
	4.0%	(10.0%)	(8.6%)	17.9%	(0.4%)	(0.8%)	5.5%	(6.9%)	(19.5%)
	19.4%	4.4%	8.4%	22.0%	12.9%	11.9%	10.8%	(7.7%)	(19.6%)
	953	1,145	1,292	2,291	2,230	2,078	154	135	140
	3,015	2,978	2,196	1,532	1,538	1,587	464	300	269
	(997)	(776)	(716)	0	0	0	(5)	(5)	(8)
	6,765	6,821	5,945	5,594	5,629	5,108	1,345	955	1,022

## SALES BY GEOGRAPHICAL AREA

■ North America ■ Europe ■ International Operations  
■ Region China ■ Japan & Korea



## GROWTH ANALYSIS

Local currencies	Growth	Share of growth
North America	11%	62%
Europe	2%	4%
International Operations	15%	26%
Region China	4%	4%
Japan & Korea	5%	4%
<b>Total sales</b>	<b>8%</b>	<b>100%</b>



## 2.3 RESEARCH AND DEVELOPMENT COSTS

### Accounting policies

Novo Nordisk's research and development is focused on therapeutic proteins within insulins for diabetes treatment, GLP-1, blood clotting factors and human growth hormone. The research activities utilise biotechnological methods based on genetic engineering, advanced protein chemistry and protein engineering. These methods have played a key role in the development of the production technology used to manufacture insulin, GLP-1, recombinant blood clotting factors, human growth hormone and glucagon.

In line with industry practice, Novo Nordisk expenses all internal research costs. Internal development costs are also expensed as incurred as these do not qualify for capitalisation as intangible assets until marketing approval by a regulatory authority is obtained or highly probable, due to regulatory and other uncertainties inherent in the development of new products.

Research and development activities are carried out by Novo Nordisk's research and development centres, mainly in Denmark, the US and China, while research and development trials are carried out all over the world. Without establishing joint ventures or operations, Novo Nordisk also enters into partnership agreements to a limited extent, primarily in terms of development and licence agreements.

Research and development costs primarily comprise employee costs, internal and external costs related to execution of studies, including manufacturing costs, facility costs of the research centres, and amortisation, depreciation and impairment losses related to intangible assets and property, plant and equipment used in the research and development activities.

A very limited part of the research and development activities is recognised outside Research and development costs:

- Up-front payments and milestones paid to partnerships prior to or upon regulatory approval are capitalised as intangible assets and amortised as Cost of goods sold over the useful life
- Royalty expenses paid to partnerships after regulatory approval are expensed as Cost of goods sold
- Royalty income received from partnerships is recognised as part of Other operating income, net
- Contractual research and development obligations to be paid in the future are disclosed separately as Commitments in note 5.3.

### RESEARCH AND DEVELOPMENT COSTS

DKK million	2015	2014	2013
Internal and external research and development costs	7,352	7,646	6,587
Employee costs (note 2.4)	5,584	5,200	4,680
Amortisation and impairment losses, intangible assets (note 3.1)	247	425	126
Depreciation and impairment losses, property, plant and equipment (note 3.2)	425	491	340
<b>Total research and development costs</b>	<b>13,608</b>	13,762	11,733
As percentage of sales	12.6%	15.5%	14.0%

For a review of development in research and development costs, refer to p 7 and p 10, '2015 performance and 2016 outlook'.

### BY BUSINESS SEGMENT (NOTE 2.2)

DKK million	2015	2014	2013
Diabetes and obesity care	10,475	9,318	7,786
Biopharmaceuticals	3,133	4,444	3,947
<b>Total</b>	<b>13,608</b>	13,762	11,733

### HISTORICAL RATIO OF RESEARCH AND DEVELOPMENT COSTS 2015

■ Research ■ Development

#### DIABETES AND OBESITY CARE



#### BIOPHARMACEUTICALS



In total, research comprises 20-30% and development 70-80% of research and development costs.

The split between research and development will fluctuate in individual years depending on the composition of the clinical development portfolio.

Research costs include the costs of the very early stages of the drug development cycle from the initial drug discovery to the first administration of the drug to humans. The activities initially focus on identifying a single drug candidate with a profile that will support a decision to initiate development activities. Before selection of the final drug candidate, it is tested in animals to gather efficacy, toxicity and pharmacokinetic information.

Development costs are incurred from the start of phase 1, when the drug is administered to humans for the first time, ie projects captured in the pipeline overview on p 20. The final product is being developed, and subsequent clinical trials (phase 2 and 3) are conducted to further test the drug in humans, using the results from these trials to attempt to obtain marketing authorisation, permitting Novo Nordisk to market and sell the developed products.

### ACTIVITIES WITHIN INFLAMMATORY DISORDERS

In September 2014, Management decided to discontinue all research and development activities within inflammatory disorders. This was a strategic decision and as such not based on safety concerns.

In total, a cost of DKK 600 million was recorded as part of research and development costs in 2014 and negatively impacted operating profit in 2014 in the Biopharmaceuticals business segment.



## 2.4 EMPLOYEE COSTS

### Accounting policies

Wages, salaries, social security contributions, annual leave and sick leave, bonuses and non-monetary benefits are recognised in the year in which the associated services are rendered by employees of Novo Nordisk. Where Novo Nordisk provides long-term employee benefits, the costs are accrued to match the rendering of the services by the employees concerned.

### EMPLOYEE COSTS

DKK million	2015	2014	2013
Wages and salaries	23,289	21,306	19,077
Share-based payment costs (note 5.1)	442	371	409
Pensions – defined contribution plans	1,715	1,607	1,428
Pensions – defined benefit plans (note 3.5)	154	142	113
Other social security contributions	1,783	1,617	1,489
Other employee costs	2,117	1,944	1,891
<b>Total employee costs for the year</b>	<b>29,500</b>	<b>26,987</b>	<b>24,407</b>
Employee costs included in intangible assets and property, plant and equipment <sup>1</sup>	(957)	(866)	(772)
Change in employee costs included in inventories	(191)	(206)	(29)
<b>Total employee costs in the Income statement</b>	<b>28,352</b>	<b>25,915</b>	<b>23,606</b>
Included in the Income statement:			
Cost of goods sold	7,239	6,224	5,160
Sales and distribution costs	12,231	10,334	9,831
Research and development costs	5,584	5,200	4,680
Administrative costs	2,658	2,426	2,250
Other operating income, net	640	1,731	1,685
<b>Total employee costs in the Income statement</b>	<b>28,352</b>	<b>25,915</b>	<b>23,606</b>
Average number of full-time employees <sup>2</sup>	40,342	40,164	36,144
Year-end number of full-time employees <sup>2</sup>	40,638	40,957	37,978

1. This reflects annual gross employee costs included in intangible assets and property, plant and equipment that will subsequently be included in depreciation and impairment losses.

2. Full-time equivalent employees in 2014 in NNIT A/S was approximately 2,400.

## REMUNERATION TO EXECUTIVE MANAGEMENT AND BOARD OF DIRECTORS

Effective 30 April 2015, Novo Nordisk's Executive Management was expanded to include four new members. Remuneration to the new members has been included from 30 April 2015.

DKK million	2015	2014	2013
Salary and cash bonus	89	71	58
Pension	22	18	15
Benefits <sup>4</sup>	7	2	2
Share-based incentive	44	27	21
Severance payments <sup>1,4</sup>	73	32	–
<b>Executive Management in total<sup>1,2,3</sup></b>	<b>235</b>	<b>150</b>	<b>96</b>
Fee to Board of Directors	12	9	9
<b>Total</b>	<b>247</b>	<b>159</b>	<b>105</b>

1. Please refer to note 5.1 and 'Remuneration', pp 49–51, for further information.
2. EVP Kåre Schultz left Novo Nordisk as of 30 April 2015. The 2015 remuneration for Kåre Schultz is included in the above table together with severance payments of DKK 72.7 million. In November 2014 EVP Lise Kingo decided to leave Novo Nordisk. The 2014 remuneration for Lise Kingo is included in the above table together with severance payments of DKK 32.2 million.
3. Total remuneration for registered members of Executive Management amounts to DKK 108 million.
4. Benefits is included in Other employee costs and severance payments is included in wages and salaries in the table to the left.

## 2.5 OTHER OPERATING INCOME, NET

### Accounting policies

Other operating income (net) comprises licence income and income of a secondary nature in relation to the main activities of Novo Nordisk. Licence income is recognised on an accrual basis in accordance with the terms and substance of the relevant agreement. Net profit, not related to Novo Nordisk, from the wholly owned subsidiary NNE Pharmaplan A/S is recognised as Other operating income. Other operating income also includes income from sale of intellectual property rights.

Divested subsidiaries are recognised in the consolidated income statement until the time when control is lost. Net gain or loss on divestments is determined as the difference between the sales proceeds and the carrying amount of net assets.

### FINANCIAL IMPACT OF PARTIAL DIVESTMENT OF NNIT A/S

As a result of the Initial Public Offering of NNIT A/S on 6 March 2015, Novo Nordisk A/S disposed of 74.5% of the 100% interest held in the company.

DKK million	2015
Sales proceeds from partial divestment	2,328
Non-current assets	(431)
Current assets	(836)
Non-current liabilities	67
Current liabilities	601
Retained 25.5% investment in NNIT A/S	153
Fair value revaluation of retained investment	644
<b>Non-recurring income from divestment of 74.5% of NNIT A/S</b>	<b>2,526</b>
Costs related to the divestment	(150)
<b>Net gain recognised in the Income statement as part of 'Other operating income, net'</b>	<b>2,376</b>
Sales proceeds from partial divestment	2,328
Cash balance disposed	(25)
<b>Consideration received recognised in the Cash flow statement</b>	<b>2,303</b>



## 2.6 INCOME TAXES AND DEFERRED INCOME TAXES

### INCOME TAXES

#### Accounting policies

The tax expense for the period comprises current and deferred tax and interest on tax cases ongoing or settled during the year, including adjustments to previous years and changes in provision for uncertain tax positions. Tax is recognised in the Income statement, except to the extent that it relates to items recognised in Equity or in Other comprehensive income.

Ongoing tax disputes, primarily related to transfer pricing cases, are included individually as part of deferred tax assets, tax receivables and tax payables.

#### Key accounting estimate – Income taxes

Novo Nordisk is subject to income taxes around the world. Significant judgement is required in determining the worldwide accrual for income taxes, deferred income tax assets and liabilities, and provision for uncertain tax positions. Novo Nordisk recognises deferred income tax assets if it is probable that sufficient taxable income will be available in the future against which the temporary differences and unused tax losses can be utilised. Management has considered future taxable income in assessing whether deferred income tax assets should be recognised. In the course of conducting business globally, transfer pricing disputes with tax authorities may occur, and Management judgement is applied to assess the possible outcome of such disputes. The most probable outcome is used as the measurement method, and Novo Nordisk believes that the provision made for uncertain tax positions not yet settled with local tax authorities is adequate. However, the actual obligation may deviate and is dependent on the result of litigations and settlements with the relevant tax authorities.

### INCOME TAXES EXPENSED

DKK million	2015	2014	2013
Current tax on profit for the year	9,648	8,562	8,540
Deferred tax on profit for the year	(1,130)	(748)	(682)
Tax on profit for the year	8,518	7,814	7,858
Adjustments recognised for current tax of prior periods	3	(313)	(74)
Adjustments recognised for deferred tax of prior periods	102	114	(429)
<b>Income taxes in the income statement</b>	<b>8,623</b>	<b>7,615</b>	<b>7,355</b>
Tax on other comprehensive income for the year, (income)/expense	87	(977)	211

Adjustments recognised for prior periods include adjustments caused by events that occurred in the current year related to current and deferred tax of prior periods. Such adjustments predominantly arise from tax payments regarding tax disputes related to transfer pricing and reversal of associated tax liability recognised in prior periods.

Tax on other comprehensive income for the year relates to tax on deferred (gains)/losses on cash flow hedges and internal profit in inventories. This loss is offset by currency adjustment of DKK 99 million in 2014 recognised as current tax in Other comprehensive income in 2015.

DKK million	2015	2014	2013
Computation of effective tax rate:			
Statutory corporate income tax rate in Denmark	23.5%	24.5%	25.0%
Deviation in foreign subsidiaries' tax rates compared with the Danish tax rate (net)	(2.9%)	(1.9%)	(2.0%)
Non-taxable income from partial divestment of NNIT A/S	(1.3%)	–	–
Non-taxable income less non-tax-deductible expenses (net)	0.1%	(0.0%)	(0.0%)
Effect on deferred tax related to change in the Danish corporate tax rate	–	–	(0.3%)
Other	0.4%	(0.3%)	(0.1%)
<b>Effective tax rate</b>	<b>19.8%</b>	<b>22.3%</b>	<b>22.6%</b>
Computation of effective tax amount:			
Corporate income tax at tax rate in Denmark	10,218	8,354	8,135
Impact from deviation in foreign subsidiaries' tax rates compared with the Danish tax rate (net)	(1,240)	(623)	(636)
Non-taxable income from partial divestment of NNIT A/S	(558)	–	–
Non-taxable income less non-tax-deductible expenses (net)	6	(12)	(8)
Effect on deferred tax related to change in the Danish corporate tax rate	–	–	(99)
Other	197	(104)	(37)
<b>Effective tax amount</b>	<b>8,623</b>	<b>7,615</b>	<b>7,355</b>

The impact of the deviation in foreign subsidiaries' tax rates compared with the Danish tax rate is mainly driven by Swiss and US business activities.

### INCOME TAXES PAID

DKK million	2015	2014	2013
Income taxes paid in Denmark	5,469	4,936	7,363
Income taxes paid outside Denmark	3,905	2,971	2,444
<b>Total income taxes paid</b>	<b>9,374</b>	<b>7,907</b>	<b>9,807</b>

The income taxes paid in Denmark in 2013 include adjustments arising from ongoing tax disputes primarily related to transfer pricing from prior periods.

### DEFERRED INCOME TAXES

#### Accounting policies

Deferred income taxes arise from temporary differences between the accounting and taxable values of the individual consolidated companies and from realisable tax loss carry-forwards using the liability method. The tax value of tax loss carry-forwards is included in deferred tax assets to the extent that the tax losses and other tax assets are expected to be utilised in future taxable income. The deferred income taxes are measured according to current tax rules and at the tax rates expected to be in force on elimination of the temporary differences. In general, the Danish tax rules related to company distributions provide exemption from tax for most repatriated profits. No provision is made for income taxes that would be payable on the distribution of unremitted earnings unless a concrete distribution of earnings is planned. The potential withholding tax amounts to DKK 288 million for 2015 (DKK 212 million in 2014).



## 2.6 INCOME AND DEFERRED INCOME TAXES (CONTINUED)

## DEVELOPMENT IN DEFERRED INCOME TAX ASSETS AND LIABILITIES

DKK million	Property, plant and equipment	Intangible assets	Inventories	Provisions and accrued expenses	Other, including tax loss carry- forwards	Offset within countries	Total
<b>2015</b>							
Net deferred tax asset/(liability) at 1 January	(715)	15	2,668	2,053	1,371	—	5,392
Income/(charge) to the Income statement	(18)	(368)	689	362	363	—	1,028
Income/(charge) to Other comprehensive income	—	—	236	8	(331)	—	(87)
Tax credit related to restricted stock units <sup>1</sup>	—	—	—	—	356	—	356
Exchange rate adjustment	(32)	16	—	136	(9)	—	111
<b>Net deferred tax asset/(liability) at 31 December</b>	<b>(765)</b>	<b>(337)</b>	<b>3,593</b>	<b>2,559</b>	<b>1,750</b>	<b>—</b>	<b>6,800</b>
Classified as follows:							
Deferred tax asset at 31 December	219	186	4,650	2,566	1,897	(2,712)	6,806
Deferred tax liability at 31 December	(984)	(523)	(1,057)	(7)	(147)	2,712	(6)

1. In addition, DKK 10 million is recorded related to current tax on restricted stock units charged to equity.

<b>2014</b>							
Net deferred tax asset/(liability) at 1 January	(853)	64	1,761	1,656	931	—	3,559
Income/(charge) to the Income statement	163	(57)	733	168	(373)	—	634
Income/(charge) to Other comprehensive income	—	—	174	69	833	—	1,076
Tax credit related to restricted stock units	—	—	—	—	—	—	—
Exchange rate adjustment	(25)	8	—	160	(20)	—	123
<b>Net deferred tax asset/(liability) at 31 December</b>	<b>(715)</b>	<b>15</b>	<b>2,668</b>	<b>2,053</b>	<b>1,371</b>	<b>—</b>	<b>5,392</b>
Classified as follows:							
Deferred tax asset at 31 December	229	286	3,665	2,057	1,435	(2,273)	5,399
Deferred tax liability at 31 December	(944)	(271)	(997)	(4)	(64)	2,273	(7)

## SPECIFICATION OF TAX LOSS CARRY-FORWARDS AT 31 DECEMBER

DKK million	2015	2014
Recognised deferred tax loss carry-forwards	34	32
Unrecognised tax loss carry-forwards	243	215
Classified as follows:		
Expiry within one year	0	0
Expiry within two to five years	7	8
Expiry after more than five years	236	207



## SECTION 3 OPERATING ASSETS AND LIABILITIES

Basis of preparation

Results for the year

Operating assets and liabilities

Capital structure and financing items

Other disclosures

This section presents details on the operating assets that form the basis for the activities of Novo Nordisk, and related liabilities. These net assets impact Novo Nordisk's long-term target for 'Operating profit after tax to net operating assets (OPAT/NOA)'.

For 2015, OPAT/NOA amounts to 148.7%, representing an increase of more than 70 percentage points over the last five years and reflecting the growth in Operating profit after tax generated on a stable base of net operating assets.

This is driven by Novo Nordisk's organic growth strategy with limited acquisition of intangible assets or businesses in general. It also reflects the fact that, in line with industry practice, Novo Nordisk does not capitalise internal development costs.

The overall approach to managing operating assets is to retain assets for research, development and production activities under the company's own control, and generally to lease non-core assets related to administration and distribution. This is a key factor in maintaining high quality in the company's products. Furthermore, being able at all times to deliver products to customers is a key priority; consequently the total production capacity reflects this priority, and the inventory level includes a level of safety stock.

### IMPACT OF US REBATES

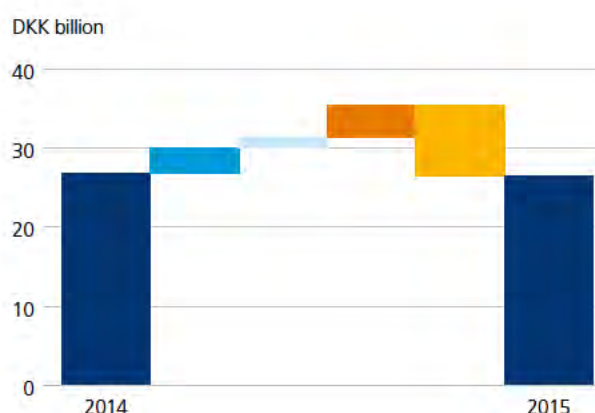
A significant factor in net operating assets also relates to the movement in the provision for sales rebates in the US, presented as provisions under current liabilities in the Balance sheet. The movement in 2015 reflects growth in US sales, national expansion of the Medicaid programme and changes in product and rebate programme mix. This is countered by the effect of faster collection from pharmacy benefit managers and authorities. The increase in inventory level partly reflects additional safety stock and new products. Trade receivables and fixed assets have developed in line with net sales.

# 149%

OPERATING PROFIT AFTER TAX  
TO NET OPERATING ASSETS

### MAIN MOVEMENTS IN NET OPERATING ASSETS

■ Net operating assets ■ Fixed assets ■ Inventories  
■ Receivables ■ Provisions and liabilities



## 3.1 INTANGIBLE ASSETS

### Accounting policies

Patents and licences, including acquired patents and licences for in-process research and development projects, are carried at historical cost less accumulated amortisation and any impairment loss. Amortisation is based on the straight-line method over the estimated useful life, which is the shorter of the legal duration and the economic useful life, not exceeding 10 years. The amortisation of patents and licences begins after regulatory approval has been obtained.

Internal development of computer software and other directly attributable development costs related to major IT projects for internal use are recognised as intangible assets if the recognition criteria are met, ie a significant business system where the expenditure leads to the creation of a durable asset. Amortisation is based on the straight-line method over the estimated useful life of 3–10 years. The amortisation begins when the asset is in the location and condition necessary for it to be capable of operating in the manner intended by Management.

#### Research and development projects

Internal research costs are fully charged to the consolidated income statement in the period in which they are incurred, consistent with industry practice; please refer to note 2.3.

For acquired in-process research and development projects, the probability effect is reflected in the cost of the asset, and the probability recognition criteria are therefore always considered satisfied. As the cost of acquired in-process research and development projects can often be measured reliably, these projects fulfil the capitalisation criteria as intangible assets on acquisition. However, further internal development costs subsequent to acquisition are treated in the same way as other internal development costs.

#### Impairment of assets

Intangible assets with an indefinite useful life and intangible assets not yet available for use are not subject to amortisation but are tested annually for impairment, irrespective of whether there is any indication that they may be impaired.

Assets that are subject to amortisation, such as intangible assets in use or with definite useful life, and other non-current assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Factors considered material that could trigger an impairment test include the following:

- Development of a competing drug
- Changes in the legal framework covering patents, rights and licences
- Advances in medicine and/or technology that affect the medical treatments
- Lower-than-predicted sales
- Adverse impact on reputation and/or brand names
- Changes in the economic lives of similar assets
- Relationship with other intangible assets or property, plant and equipment
- Changes or anticipated changes in participation rates or reimbursement policies.



### 3.1 INTANGIBLE ASSETS (CONTINUED)

If the carrying amount of intangible assets exceeds the recoverable amount based on the existence of one or more of the above indicators of impairment, any impairment is measured based on discounted projected cash flows. Impairments are reviewed at each reporting date for possible reversal.

#### INTANGIBLE ASSETS

DKK million	2015	2014
Patents and licences	1,139	454
In-process and developed software	1,019	924
<b>Total</b>	<b>2,158</b>	<b>1,378</b>

In 2015, an impairment loss of DKK 243 million (DKK 423 million in 2014) related to patents and licences was recognised.

Intangible assets not yet in use amount to DKK 1,261 million (DKK 656 million in 2014), primarily patents and licences in relation to research and development projects. Impairment tests in 2015 and 2014 of patents and licences not yet in use are based on Management's projections and anticipated net present value of estimated future cash flows from marketable products. Management has used a pre-tax discount rate (WACC) of 8% based on the risk inherent in the related activity's current business model and industry comparisons. Terminal values used are based on the expected life of products, forecasted life cycle and cash flow over that period, and the useful life of the underlying assets.

#### AMORTISATION AND IMPAIRMENT LOSSES

DKK million	2015	2014
Cost of goods sold	127	105
Sales and distribution costs	11	28
Research and development costs	247	425
Other operating income, net	7	8
<b>Total amortisation and impairment losses</b>	<b>392</b>	<b>566</b>

For further information regarding 2014 impairment of inflammation projects, please refer to note 2.3.

### 3.2 PROPERTY, PLANT AND EQUIPMENT

#### Accounting policies

Property, plant and equipment is measured at historical cost less accumulated depreciation and any impairment loss. The cost of self-constructed assets includes costs directly and indirectly attributable to the construction of the assets. Subsequent cost is included in the asset's carrying amount or recognised as a separate asset only when it is probable that future economic benefits associated with the item will flow to Novo Nordisk and the cost of the item can be measured reliably. In general, construction of major investments is self-financed and thus no interest on loans is capitalised as part of the cost. Depreciation is based on the straight-line method over the estimated useful lives of the assets:

- Buildings: 12–50 years
- Plant and machinery: 5–16 years
- Other equipment: 3–10 years
- Land: not depreciated.

The depreciation commences when the asset is available for use, ie when it is in the location and condition necessary for it to be capable of operating in the manner intended by Management.

The assets' residual values and useful lives are reviewed and adjusted, if appropriate, at the end of each reporting period. If the asset's carrying amount is higher than its estimated recoverable amount, it is written down to the recoverable amount; please refer to note 3.1 for a description of impairment of assets. Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised in the Income statement.

Plant and equipment with no alternative use developed as part of a research and development project is expensed. However, plant and equipment with an alternative use or used for general research and development purposes is capitalised and depreciated over its estimated useful life as research and development costs.



## 3.2 PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

## PROPERTY, PLANT AND EQUIPMENT

DKK million	Land and buildings	Plant and machinery	Other equipment	Assets in course of construction	Total
<b>2015</b>					
Cost at the beginning of the year	17,391	20,410	3,882	5,801	47,484
Additions during the year	334	456	222	4,212	5,224
Disposals during the year	(159)	(366)	(228)	—	(753)
Disposals related to partial divestment of NNIT A/S	(188)	(2)	(657)	—	(847)
Transfer from/(to) other items	658	1,565	264	(2,487)	0
Effect of exchange rate adjustment	(33)	(28)	33	90	62
Cost at the end of the year	18,003	22,035	3,516	7,616	51,170
Depreciation and impairment losses at the beginning of the year	6,933	14,910	2,505	—	24,348
Depreciation for the year	761	1,381	328	—	2,470
Impairment losses for the year	8	65	24	—	97
Depreciation and impairment losses reversed on disposals during the year	(140)	(332)	(215)	—	(687)
Depreciation reversed related to partial divestment of NNIT A/S	(61)	(2)	(387)	—	(450)
Effect of exchange rate adjustment	(53)	(122)	22	—	(153)
Depreciation and impairment losses at the end of the year	7,448	15,900	2,277	—	25,625
Carrying amount at the end of the year	10,555	6,135	1,239	7,616	25,545
<b>2014</b>					
Cost at the beginning of the year	16,184	18,964	3,457	5,432	44,037
Additions during the year	234	459	384	2,913	3,990
Disposals during the year	(392)	(324)	(279)	—	(995)
Transfer from/(to) other items	1,156	1,168	250	(2,574)	0
Effect of exchange rate adjustment	209	143	70	30	452
Cost at the end of the year	17,391	20,410	3,882	5,801	47,484
Depreciation and impairment losses at the beginning of the year	6,267	13,614	2,274	—	22,155
Depreciation for the year	855	1,436	362	—	2,653
Impairment losses for the year	94	42	80	—	216
Depreciation and impairment losses reversed on disposals during the year	(297)	(265)	(260)	—	(822)
Effect of exchange rate adjustment	14	83	49	—	146
Depreciation and impairment losses at the end of the year	6,933	14,910	2,505	—	24,348
Carrying amount at the end of the year	10,458	5,500	1,377	5,801	23,136

## DEPRECIATION AND IMPAIRMENT LOSSES

DKK million	2015	2014
Cost of goods sold	2,008	2,141
Sales and distribution costs	54	36
Research and development costs	425	491
Administrative costs	53	83
Other operating income, net	27	118
Total depreciation and impairment losses	2,567	2,869



### 3.3 INVENTORIES

#### Accounting policies

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in, first-out method. Cost comprises direct production costs such as raw materials, consumables and labour as well as indirect production costs. Production costs for work in progress and finished goods include indirect production costs such as employee costs, depreciation, maintenance etc.

If the expected sales price less completion costs to execute sales (net realisable value) is lower than the carrying amount, a write-down is recognised for the amount by which the carrying amount exceeds its net realisable value.

Inventory manufactured prior to regulatory approval (pre-launch inventory) is capitalised but immediately provided for, until there is a high probability of regulatory approval of the product. Before that point, a provision is made against the carrying amount of inventory to its recoverable amount and recorded as research and development costs. At the point when a high probability of regulatory approval is obtained, the provision recorded is reversed, up to no more than the original cost.

#### Key accounting estimate – Indirect production costs

Indirect production costs account for 50% of the net inventory value, reflecting a lengthy production process compared with low direct raw material cost. The production of both diabetes and obesity care and Biopharmaceutical products is highly complex from fermentation to purification and formulation, including quality control of all production processes. Furthermore, the process is very sensitive to manufacturing conditions. These factors all influence the parameters for capitalisation of indirect production costs in Novo Nordisk and full cost of the products. Indirect production costs are measured using a standard cost method, which is reviewed regularly to ensure relevant measures of capacity utilisation, production lead time, cost base and other relevant factors, hence inventory is valued at actual cost. When calculating total inventory, Management must make certain judgements about cost of production, standard cost variances and idle capacity in estimating indirect production costs for capitalisation. Changes in the parameters for calculation of indirect production costs could have an impact on the gross margin and the overall valuation of inventories.

#### INVENTORIES

DKK million	2015	2014
Raw materials	2,020	1,723
Work in progress	8,549	7,539
Finished goods	3,608	3,260
Total inventories (gross)	14,177	12,522
Inventory write-downs at year-end	1,419	1,165
<b>Total inventories (net)</b>	<b>12,758</b>	<b>11,357</b>
Indirect production costs included in work in progress and finished goods	6,436	5,759
Share of total inventories (net)	50%	51%
<b>MOVEMENTS IN INVENTORY WRITE-DOWNS</b>		
Inventory write-downs at the beginning of the year	1,165	960
Inventory write-downs during the year	698	467
Utilisation of inventory write-downs	(192)	(123)
Reversal of inventory write-downs	(252)	(139)
<b>Inventory write-downs at the end of the year</b>	<b>1,419</b>	<b>1,165</b>

There is no inventory carried at net realisable value at 31 December for either 2014 or 2015, except for the fully impaired inventory disclosed in the table.

### 3.4 TRADE RECEIVABLES

#### Accounting policies

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less allowance for doubtful trade receivables.

The allowance is deducted from the carrying amount of Trade receivables and the amount of the loss is recognised in the Income statement under Sales and distribution costs. Subsequent recoveries of amounts previously written off are credited against Sales and distribution costs.

#### Key accounting estimate – Allowance for doubtful trade receivables

The customer base of Novo Nordisk comprises government agencies, wholesalers, retail pharmacies, managed care and other customers. Management makes allowance for doubtful trade receivables in anticipation of estimated losses resulting from the subsequent inability of customers to make required payments. If the financial circumstances of customers were to deteriorate, resulting in an impairment of their ability to make payments, an additional allowance could be required in future periods. When evaluating the adequacy of the allowance for doubtful trade receivables, Management analyses trade receivables and examines historical bad debt, customer concentrations, customer creditworthiness and payment history, current economic trends and changes in customer payment terms. Please refer to note 4.2 for a general description of credit risk.

As a result of the significant sales to countries within Region International Operations, and the fact that many of these countries have low credit ratings, the relative impact of countries within Region International Operations on the allowance for doubtful trade receivables is increasing. The political climate in Russia and Argentina is impacted by instability and sharp currency depreciation. Novo Nordisk is monitoring developments closely. Payment history as well as current economic conditions and indicators are taken into account in the valuation of trade receivables.

Please refer to note 2.2 for a geographical split of trade receivables and allowance for doubtful trade receivables.

#### TRADE RECEIVABLES

DKK million	2015	2014
Trade receivables (gross)	16,651	14,036
Allowance for doubtful trade receivables	1,166	995
<b>Trade receivables (net)</b>	<b>15,485</b>	<b>13,041</b>
Trade receivables (net) equals a credit period of 52 days (54 days in 2014).		
Age analysis of trade receivables		
<i>Non-impaired trade receivables</i>		
– Not yet due	14,605	12,664
– Overdue by between 1 and 179 days	880	337
– Overdue by between 180 and 360 days	0	40
Trade receivables with credit risk exposure	15,485	13,041
<b>MOVEMENTS IN ALLOWANCE FOR DOUBTFUL TRADE RECEIVABLES</b>		
Carrying amount at the beginning of the year	995	989
Confirmed losses	(28)	(13)
Reversal of allowance for confirmed losses	(26)	(11)
Allowance for possible losses during the year	257	57
Effect of exchange rate adjustment	(32)	(27)
<b>Allowance at the end of the year</b>	<b>1,166</b>	<b>995</b>



### 3.5 RETIREMENT BENEFIT OBLIGATIONS

#### Accounting policies

Novo Nordisk operates a number of defined contribution plans throughout the world. Novo Nordisk's contributions to the defined contribution plans are charged to the Income statement in the year to which they relate. In a few countries, Novo Nordisk still operates defined benefit plans. The defined benefit plans for Germany cover all employees employed before November 2003. Obligations relating to employees employed after 2003 are covered by a defined contribution plan. In Switzerland the employee pension scheme is set up as a combined defined benefit and defined contribution plan, and is mandatory. The plan in Japan covers all employees and is set up as a combined defined benefit and defined contribution plan. The plan in the US is structured as a post-retirement healthcare plan covering all employees. From 2012 this plan was changed into a defined contribution plan covering all US employees.

The costs for the year for defined benefit plans are determined using the projected unit credit method. This reflects services rendered by employees to the valuation dates and is based on actuarial assumptions primarily regarding discount rates used in determining the present value of benefits and projected rates of remuneration growth. Discount rates are based on the market yields of high-rated corporate bonds in the country concerned.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to Other comprehensive income in the period in which they arise. Past service costs are recognised immediately in the Income statement.

Pension plan assets are only recognised to the extent that Novo Nordisk is able to derive future economic benefits such as refunds from the plan or reductions of future contributions. Novo Nordisk manages the allocation and investment of pension plan assets with the purpose of meeting the long-term objectives. The main objectives are to meet present and future benefit obligations, provide sufficient liquidity to meet such payment requirements and provide a total return that maximises the ratio of the plan assets to the plan liabilities by maximising return on the assets at an appropriate level of risk.

The Group's defined benefit plans are pension plans and medical plans and are usually funded by payments from Group companies and by employees to funds independent of Novo Nordisk. Where a plan is unfunded, a liability for the retirement benefit obligation is recognised in the Balance sheet. Costs recognised for retirement benefits are included in Cost of goods sold, Sales and distribution costs, Research and development costs, and Administrative costs.

The net obligation recognised in the Balance sheet is reported as non-current liabilities.

#### RETIREMENT BENEFIT OBLIGATIONS

DKK million	Germany	Switzerland	Japan	US	Other	2015 Total	2014 Total
At the beginning of the year	710	246	318	381	320	1,975	1,544
Current service costs	28	31	31	26	32	148	121
Past service costs and settlements	—	(11)	—	—	(35)	(46)	(2)
Interest costs	18	4	3	15	7	47	49
Remeasurement (gains)/losses <sup>1</sup>	10	39	1	(24)	18	44	250
Plan participant contributions etc	—	11	—	—	14	25	15
Benefits paid to employees	(5)	(4)	(17)	(9)	1	(34)	(41)
Exchange rate adjustment	2	28	34	44	1	109	39
<b>At the end of the year</b>	<b>763</b>	<b>344</b>	<b>370</b>	<b>433</b>	<b>358</b>	<b>2,268<sup>2</sup></b>	<b>1,975<sup>2</sup></b>

#### FAIR VALUE OF PLAN ASSETS

At the beginning of the year	441	169	250	—	84	944	856
Interest income	12	3	2	—	3	20	24
Settlements	—	—	—	—	(22)	(22)	—
Remeasurement gains/(losses)	1	—	6	—	—	7	3
Employer contributions	22	24	28	9	13	96	85
Plan participant contributions etc	—	11	—	—	11	22	17
Benefits paid to employees	(5)	(4)	(17)	(9)	1	(34)	(41)
Exchange rate adjustment	1	20	27	—	1	49	—
<b>At the end of the year</b>	<b>472</b>	<b>223</b>	<b>296</b>	<b>—</b>	<b>91</b>	<b>1,082</b>	<b>944</b>

#### Net retirement benefit obligations at the end of the year

291	121	74	433	267	1,186	1,031
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1. Remeasurement relates primarily to changes in financial assumptions.

2. Present value of partly funded retirement benefit obligations amounts to DKK 1,711 million (DKK 1,478 million in 2014). Present value of unfunded retirement benefit obligations amounts to DKK 557 million (DKK 497 million in 2014).



### 3.5 RETIREMENT BENEFIT OBLIGATIONS (CONTINUED)

#### NET RETIREMENT BENEFIT OBLIGATIONS

DKK million	2015	2014
At the beginning of the year	1,031	688
Costs recognised in the Income statement <sup>1</sup>	154	142
Reversal of remeasurements recognised in Other comprehensive income	37	247
Employer contributions	(96)	(85)
Exchange rate adjustment <sup>2</sup>	60	39
At the end of the year	1,186	1,031

1. Employee costs comprising service costs, net interest, settlements and plan participant contributions etc. Please refer to note 2.4.  
2. As part of exchange rate adjustments in subsidiaries recognised in Other comprehensive income.

Please refer to note 5.3 for a maturity analysis of the net retirement benefit obligation.

Novo Nordisk does not expect the contributions over the next five years to differ significantly from current contributions.

#### WEIGHTED AVERAGE ASSET ALLOCATION OF FUNDED RETIREMENT OBLIGATIONS

	2015		2014	
	DKK million	%	DKK million	%
Coverage Insurance <sup>1</sup>	695	64%	632	67%
Bonds	244	23%	204	22%
Equities	91	8%	76	8%
Cash at bank	36	3%	21	2%
Property	16	2%	11	1%
Total	1,082	100%	944	100%

1. Novo Nordisk's defined benefit plans, mainly in Germany and Switzerland, are reimbursed by the international insurer Allianz regardless of the value of the plan assets. The risk related to the plan assets in these countries is therefore counterparty risk against Allianz.

#### KEY ASSUMPTIONS USED FOR VALUATION

	2015	2014
Discount rate	Weighted average 2%	Weighted average 2%
Projected future remuneration increases	2%	2%

Actuarial valuations are performed annually for all major defined benefit plans. Assumptions regarding future mortality are based on actuarial advice in accordance with published statistics and experience in each country. Other assumptions such as medical cost trend rate and inflation are also considered in the calculation.

Significant actuarial assumptions for the determination of the retirement benefit obligation are discount rate and expected future remuneration increases. The sensitivity analysis below has been determined based on reasonably likely changes in the assumptions occurring at the end of the period.

DKK million	1 %-point increase	1 %-point decrease
Discount rate	(323)	414
Future remuneration	94	(84)

The sensitivities above consider the single change shown with the other assumptions assumed to be unchanged. In practice, changes in one assumption may be accompanied by offsetting changes in another assumption (although this is not always the case).

### 3.6 PROVISIONS AND CONTINGENT LIABILITIES

#### Accounting policies

Provisions for sales rebates and discounts granted to government agencies, wholesalers, retail pharmacies, managed care and other customers are recorded at the time the related revenues are recorded or when the incentives are offered. Provisions are calculated based on historical experience and the specific terms in the individual agreements.

Provisions for legal disputes are recognised where a legal or constructive obligation has been incurred as a result of past events and it is probable that there will be an outflow of resources that can be reliably estimated. In this case, Novo Nordisk arrives at an estimate based on an evaluation of the most likely outcome. Disputes for which no reliable estimate can be made are disclosed as contingent liabilities.

Novo Nordisk issues credit notes for expired goods as a part of normal business. Where there is historical experience or a reasonably accurate estimate of expected future returns can otherwise be made, a provision for estimated product returns is recorded. The provision is measured at gross sales value.

Provisions are measured at the present value of the anticipated expenditure for settlement of the legal or constructive obligation using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognised as a financial expense.

#### Key accounting estimate – Provisions for sales rebates

Novo Nordisk records provisions for expected sales rebates, including Medicaid and Medicare in the US. Expected rebates are recognised as Provisions when timing or amount is uncertain. Where absolute amounts are known, the rebates are recognised as Other liabilities.

Such estimates are based on analyses of existing contractual obligations and historical experience. Provisions are calculated on the basis of a percentage of sales for each product as defined by the contracts with the various customer groups.

Provisions for sales rebates are adjusted to actual amounts as rebates, discounts and returns are processed. Please refer to note 2.1 for further information on sales rebates and provisions.

Novo Nordisk considers the provisions established for sales rebates to be reasonable and appropriate based on currently available information. However, the actual amount of rebates and discounts may differ from the amounts estimated by Management as more detailed information becomes available.

#### Key accounting estimate – Provisions for legal disputes

Provisions for legal disputes consist of various types of provision linked to ongoing legal disputes. Management makes judgements about provisions and contingencies, including the probability of pending and potential future litigation outcomes, which, by their very nature, are dependent on inherently uncertain future events. When determining likely outcomes of litigations etc, Management considers the input of external counsels on each case, as well as known outcomes in case law.

Although Management believes that the total provisions for legal proceedings are adequate based on currently available information, there can be no assurance that there will not be any changes in facts or matters, or that any future lawsuits, claims, proceedings or investigations will not be material.



### 3.6 PROVISIONS AND CONTINGENT LIABILITIES (CONTINUED)

#### PROVISIONS

DKK million	Provisions for sales rebates	Provisions for legal disputes	Provisions for product returns	Other provisions <sup>1</sup>	2015 Total	2014 Total
At the beginning of the year	11,002	936	797	896	13,631	10,493
Additional provisions, including increases to existing provisions	45,190	602	319	507	46,618	27,208
Amount used during the year	(40,958)	(126)	(313)	(324)	(41,721)	(24,754)
Adjustments, including unused amounts reversed during the year	—	(52)	—	(4)	(56)	(462)
Effect of exchange rate adjustment	1,274	37	—	41	1,352	1,146
<b>At the end of the year</b>	<b>16,508</b>	<b>1,397</b>	<b>803</b>	<b>1,116</b>	<b>19,824</b>	<b>13,631</b>
Non-current liabilities	—	1,397	482	886	2,765	2,041
Current liabilities	16,508	—	321	230	17,059	11,590

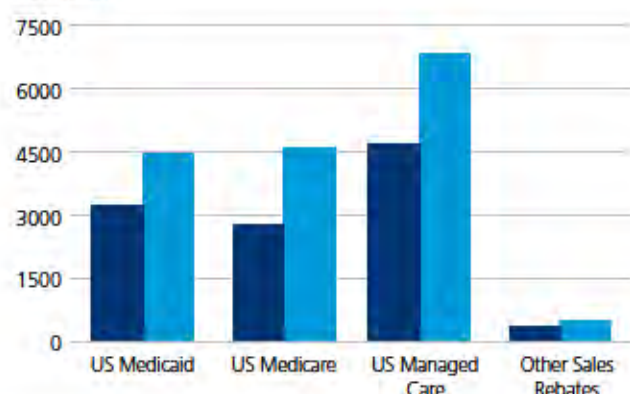
1. Other provisions consist of various types of provision, including employee benefits such as jubilee benefits, company-owned life insurance etc. Assets related to company-owned life insurance are presented as part of Other financial assets.

For non-current liabilities, provisions for product returns will be utilised in 2017 and 2018 and other provisions will be utilised in 2017. For provisions for legal disputes, the time of settlement cannot be determined.

#### PROVISIONS FOR SALES REBATES

■ 2014 ■ 2015

DKK million



On 21 January 2016, the Centers for Medicare & Medicaid Services (CMS) in the US published its final rule implementing Affordable Care Act changes to the Medicaid Drug Rebate Program and Medicaid reimbursement for covered outpatient drugs. The rule creates a regulatory definition for Average Manufacturer Price, the key metric for determining manufacturer rebates and pharmacy reimbursement under the Medicaid programme, including Norditropin®. Management has reviewed the implications of the final rule and assessed that the rule does not have a material impact on Novo Nordisk's financial position, operating profit or cash flow for the period ended 31 December 2015.

#### Contingent liabilities

Novo Nordisk is currently involved in pending litigations, claims and investigations arising out of the normal conduct of its business. While provisions that Management deems to be reasonable and appropriate have been made for probable losses, there are uncertainties connected with these estimates. Novo Nordisk does not expect the pending litigations, claims and investigations, individually and in the aggregate, to have a material impact on Novo Nordisk's financial position, operating profit or cash flow in addition to the amounts accrued as provision for legal disputes.

#### Pending litigation against Novo Nordisk

In the US, a number of claims alleging pancreatic cancer and pancreatitis have been filed against various incretin-based product manufacturers, including Novo Nordisk. As of 1 February 2016, Novo Nordisk was named by 194 plaintiffs in product liability cases related to Victoza® and other GLP-1/DPP-IV products, predominantly alleging pancreatic cancer. 134 of the Novo Nordisk plaintiffs have also named other defendants in their lawsuits.

Judgement of dismissal has been entered in Novo Nordisk's favour in the vast majority of cases naming the company as a defendant. A notice of appeal has been filed in both state and federal cases. Currently, Novo Nordisk does not have any individual trials scheduled in 2016. Novo Nordisk does not expect the pending claims to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

#### Pending claims against Novo Nordisk and investigations involving Novo Nordisk

In February 2011, the office of the US Attorney for the District of Massachusetts served Novo Nordisk with a subpoena calling for the production of documents regarding potential civil and criminal offences relating to the company's marketing and promotional practices for the following products: NovoLog®, Levemir® and Victoza®. This matter is being conducted by the US Attorney for the District of Columbia. Novo Nordisk continues to cooperate with the US Attorney in this investigation. Novo Nordisk does not expect the investigation to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

Following the launch of NovoEight® ('N8') in April 2015, Baxter (now Baxalta) filed a complaint regarding patent infringement with the US International Trade Commission ('ITC'). The Baxalta patents, which expire in June 2018, all relate to manufacturing therapeutic protein products, such as Factor VIII. A parallel lawsuit is pending in the US District Court for the District of New Jersey but has been stayed pending resolution of the matter in the ITC. Novo Nordisk does not expect these matters to have a material impact on Novo Nordisk's financial position, operating profit or cash flow.

In addition to the above, the Novo Nordisk Group is engaged in certain litigation proceedings and various ongoing audits and investigations. In the opinion of Management, neither settlement or continuation of such proceedings nor such pending audits and investigations are expected to have a material effect on Novo Nordisk's financial position, operating profit or cash flow.

### 3.7 OTHER LIABILITIES

#### OTHER LIABILITIES

DKK million	2015	2014
Employee costs payable	4,545	4,454
Accruals	4,285	3,684
Accrued rebates	1,555	912
VAT and duties payable	896	744
Research and development clinical trials	532	763
Amount owed to associated company	259	—
Other payables	583	494
<b>Total other liabilities</b>	<b>12,655</b>	<b>11,051</b>



## SECTION 4 CAPITAL STRUCTURE AND FINANCING ITEMS

Basis of preparation

Results for the year

Operating assets  
and liabilitiesCapital structure and  
financing items

Other disclosures

The notes in this section provide an insight into Novo Nordisk's capital structure, earnings per share, free cash flow and financing items. The free cash flow impacts Novo Nordisk's long-term target for 'Cash to earnings (three-year average)'. Cash to earnings is defined as 'free cash flow as a percentage of net profit'. Free cash flow is the cash amount generated that is available for further investments in Novo Nordisk and distribution to shareholders without consuming prior years' cash creation retained in the company.

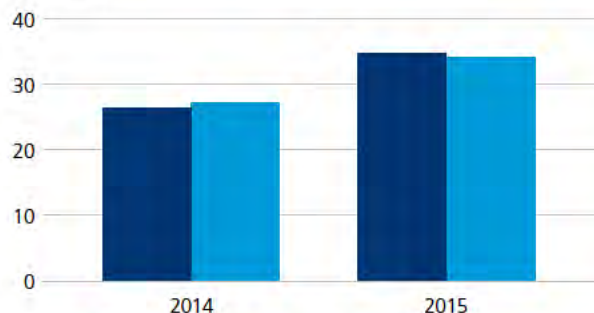
Novo Nordisk has a low debt-to-equity ratio reflecting growth based on limited debt financing. Further information on the company's capital structure can be found in 'Shares and capital structure' on pp 44–45.

The main financial risk is foreign exchange exposure, where Novo Nordisk aims to reduce the short-term impact from movements in key currencies by hedging future cash flows. Notes 4.2 and 4.3 include more information in this respect.

### NET PROFIT AND FREE CASH FLOW

■ Net profit ■ Free cash flow

DKK billion



# 88%

NET CASH DISTRIBUTED TO SHAREHOLDERS  
IN PERCENT OF FREE CASH FLOW

### Net cash distribution to shareholders

In 2015, the net cash distribution to shareholders in the form of dividends and share repurchases amounts to DKK 30.1 billion compared with free cash flow of DKK 34.2 billion in line with the guiding principle of paying out excess capital to investors after funding organic growth and potential acquisitions.

## 4.1 SHARE CAPITAL, DISTRIBUTION TO SHAREHOLDERS AND EARNINGS PER SHARE

### SHARE CAPITAL

DKK million	A share capital	B share capital	Total share capital
Development in share capital:			
Share capital 2011	107	473	580
Cancelled in 2012	—	(20)	(20)
Cancelled in 2013	—	(10)	(10)
Cancelled in 2014	—	(20)	(20)
Share capital at the beginning of the year	107	423	530
Cancelled in 2015	—	(10)	(10)
<b>Share capital at the end of the year</b>	<b>107</b>	<b>413</b>	<b>520</b>

At the end of 2015, the share capital amounted to DKK 107 million in A share capital and DKK 413 million in B share capital (equal to 2,063 million B shares of DKK 0.20).



## 4.1 SHARE CAPITAL, DISTRIBUTION TO SHAREHOLDERS AND EARNINGS PER SHARE (CONTINUED)

### TREASURY SHARES

#### Accounting policies

Treasury shares are deducted from the share capital on cancellation at their nominal value of DKK 0.20 per share. Differences between this amount and the amount paid to acquire or received for disposing of treasury shares are deducted directly in equity.

	Market value DKK million	As % of share capital before cancellation	As % of share capital after cancellation	2015 Number of B shares of DKK 0.20 (million)	2014 Number of B shares of DKK 0.20 (million)
Holding at the beginning of the year	14,787	2.1%		57	103
Cancellation of treasury shares	(13,015)	(1.8%)		(50)	(100)
Holding of treasury shares, adjusted for cancellation	1,772	0.3%	0.3%	7	3
Transfer regarding options and restricted stock units	(242)		0.0%	(1)	(2)
Purchase during the year	17,229		1.8%	48	59
Sale during the year	(33)		(0.1%)	(2)	(3)
Value adjustment	2,136		—	—	—
<b>Holding at the end of the year</b>	<b>20,862</b>		<b>2.0%</b>	<b>52</b>	<b>57</b>

Treasury shares are primarily acquired to reduce the company's share capital. In addition, a limited part is used to finance Novo Nordisk's long-term share-based incentive programme (restricted stock units) and restricted stock units to employees.

Novo Nordisk's guiding principle is that any excess capital, after the funding of organic growth opportunities and potential acquisitions, should be returned to investors. Novo Nordisk applies a pharmaceutical industry payout ratio to dividend payments, which are complemented by share repurchase programmes.

The purchase of treasury shares during the year relates to the remaining part of the 2014 share repurchase programme totalling DKK 1.0 billion and the DKK 17.5 billion share repurchase programme of Novo Nordisk B shares for 2015, of which DKK 1.6 billion remains at year-end. The programme ends on 1 February 2016. Transfer of treasury shares relates to exercised share options, long-term share-based incentive programme and restricted stock units to employees.

The holding of treasury shares amounts to 52,168,703 shares of DKK 0.20 at year-end, corresponding to DKK 10 million of the share capital (56,807,153 shares and DKK 11 million of the share capital in 2014). At year-end, 7.2 million shares of the holding of treasury B shares are regarded as hedges for the long-term share-based incentive programme and restricted stock units to employees.

### NET CASH DISTRIBUTION TO SHAREHOLDERS

DKK million	2015	2014	2013
Dividends	12,905	11,866	9,715
Share repurchases	17,196	14,667	13,924
<b>Total</b>	<b>30,101</b>	<b>26,533</b>	<b>23,639</b>

At the end of 2015, proposed dividends (not yet declared) of DKK 16,230 million (DKK 6.40 per share) are included in Retained earnings. The declared dividend included in Retained earnings was DKK 12,905 million (DKK 5.0 per share) in 2014 and DKK 11,866 million (DKK 4.50 per share) in 2013. No dividend is declared on treasury shares.

### EARNINGS PER SHARE

#### Accounting policies

Earnings per share is presented as both basic and diluted earnings per share. Basic earnings per share is calculated as net profit divided by the average number of shares outstanding. Diluted earnings per share is calculated as net profit divided by the sum of average number of shares outstanding, including the dilutive effect of the outstanding share bonus pool and options 'in the money'. Please refer to 'Financial definitions' on p 94 for a description of the calculation of the dilutive effect.

DKK million		2015	2014	2013
Net profit for the year		34,860	26,481	25,184
Average number of shares outstanding	in 1,000 shares	2,571,219	2,621,226	2,679,362
Dilutive effect of outstanding share bonus pool and options 'in the money' <sup>1</sup>	in 1,000 shares	6,479	8,992	14,263
Average number of shares outstanding, including dilutive effect of options 'in the money'	in 1,000 shares	2,577,698	2,630,218	2,693,625
<b>Basic earnings per share</b>	DKK	<b>13.56</b>	10.10	9.40
<b>Diluted earnings per share</b>	DKK	<b>13.52</b>	10.07	9.35

1. The dilutive effect has been reduced as the exercise period for options related to the 2006 programme has matured. For further information on the outstanding share bonus pool and options, please refer to note 5.1.



## 4.2 FINANCIAL RISKS

Novo Nordisk has centralised management of the Group's financial risks. The overall objectives and policies for the company's financial risk management are outlined in an internal Treasury Policy, which is approved by the Board of Directors. The Treasury Policy consists of the Foreign Exchange Policy, the Investment Policy, the Financing Policy and the Policy regarding Credit Risk on Financial Counterparts, and includes a description of permitted financial instruments and risk limits.

Novo Nordisk only hedges commercial exposures and consequently does not enter into derivative transactions for trading or speculative purposes. Novo Nordisk uses a fully integrated Treasury Management System to manage all financial positions. All positions are marked-to-market based on real-time quotes, and risk is assessed using generally accepted standards.

### Foreign exchange risk

Foreign exchange risk is the principal financial risk for Novo Nordisk and as such has a significant impact on the Income statement, Other comprehensive income, Balance sheet and Statement of cash flows.

The overall objective of foreign exchange risk management is to reduce the short-term negative impact of exchange rate fluctuations on earnings and cash flow, thereby increasing the predictability of the financial results.

The majority of Novo Nordisk's sales are in USD, EUR, CNY, JPY, GBP and CAD. Consequently, Novo Nordisk's foreign exchange risk is most significant in USD, CNY and JPY, while the EUR exchange rate risk is regarded as low due to Denmark's fixed-rate policy towards EUR.

Novo Nordisk hedges existing assets and liabilities in key currencies as well as future expected cash flows up to a maximum of 24 months forward. Hedge accounting is applied to match the impact of the hedged item and the hedging instrument in the consolidated income statement. Management has chosen to classify the result of hedging activities as part of financial items.

During 2015, the hedging horizon varied between 10 and 13 months for USD, CNY, JPY, GBP and CAD. Currency hedging is based upon expectations of future exchange rates and mainly uses foreign exchange forwards and foreign exchange options matching the due dates of the hedged items. Expected cash flows are continually assessed using historical inflows, budgets and monthly sales forecasts. Hedge effectiveness is assessed on a regular basis.

### KEY CURRENCIES

Exchange rate DKK per 100	2015	2014	2013
<b>USD</b>			
Average	673	562	562
Year-end	683	612	541
Year-end change	11.6%	13.1%	(4.4%)
<b>CNY</b>			
Average	107	91	91
Year-end	105	99	89
Year-end change	6.1%	11.2%	(2.2%)
<b>JPY</b>			
Average	5.56	5.32	5.77
Year-end	5.67	5.12	5.14
Year-end change	10.7%	(0.4%)	(21.8%)
<b>GBP</b>			
Average	1,028	925	878
Year-end	1,011	952	892
Year-end change	6.2%	6.7%	(2.3%)
<b>CAD</b>			
Average	527	509	545
Year-end	492	527	505
Year-end change	(6.6%)	4.4%	(11.2%)

The financial contracts existing at year-end cover the expected future cash flow for the following number of months:

	2015	2014
USD	11 months	11 months
CNY <sup>1</sup>	11 months	11 months
JPY	12 months	13 months
GBP	12 months	11 months
CAD	11 months	11 months

1. USD and Chinese yuan traded offshore (CNH) are used as proxies when hedging Novo Nordisk's CNY currency exposure.

### Foreign exchange sensitivity analysis:

A 5% increase/decrease in the following currencies would impact Novo Nordisk's operating profit as outlined in the table below:

DKK million	Estimated for 2016	2015
USD	2,000	1,600
CNY	300	260
JPY	150	115
GBP	85	80
CAD	70	60

At year-end a 5% increase/decrease in all other currencies versus EUR and DKK would affect the hedging instruments' impact on Other comprehensive income and the Income statement as outlined in the table below:

DKK million	5% increase in all other currencies against DKK and EUR	5% decrease in all other currencies against DKK and EUR
<b>2015</b>		
Other comprehensive income	(2,135)	2,250
Income statement	74	(96)
<b>Total</b>	<b>(2,061)</b>	<b>2,154</b>
<b>2014</b>		
Other comprehensive income	(1,724)	1,729
Income statement	124	(107)
<b>Total</b>	<b>(1,600)</b>	<b>1,622</b>

The foreign exchange sensitivity analysis estimated for 2016 comprises effects from the Group's Cash, Trade receivables and Trade payables, Current and non-current loans, Current and non-current financial investments, and Foreign exchange forwards and Foreign exchange options at year-end 2015. Anticipated currency transactions, investments and non-current assets are not included.

### Interest rate risk

Changes in interest rates affect Novo Nordisk's financial instruments. At the end of 2015, a 1 percentage point increase in the interest rate level would, all else being equal, result in a decrease in the fair value of Novo Nordisk's financial instruments of DKK 22 million (a decrease in the fair value of DKK 3 million in 2014).

The financial instruments included in the sensitivity analysis consist of marketable securities and non-current loans. Foreign exchange forwards and foreign exchange options are not included due to the limited effect that a parallel shift in interest rates in all currencies has on these instruments.

### Liquidity risk

Novo Nordisk ensures the availability of the required liquidity through a combination of cash management, highly liquid investment portfolios and uncommitted as well as committed facilities. Novo Nordisk uses cash pools for optimisation and centralisation of cash management.



## 4.2 FINANCIAL RISKS (CONTINUED)

### Credit risk

Credit risk arises from the possibility that transactional counterparties may default on their obligations, causing financial losses for the Group. Novo Nordisk considers its maximum credit risk on financial counterparties to be DKK 20,769 million (2014: DKK 15,935 million). In addition, Novo Nordisk considers its maximum credit risk on Trade receivables, Other receivables less prepayments and Other financial assets to be DKK 18,202 million (2014: DKK 15,425 million). Please refer to note 4.7 for details of the Group's total financial assets.

To manage credit risk on financial counterparties, Novo Nordisk only enters into derivative financial contracts and money market deposits with financial counterparties possessing a satisfactory long-term credit rating from two out of the three selected ratings agencies: Standard and Poor's, Moody's and Fitch. Furthermore, maximum credit lines defined for each counterparty diversify the overall counterparty risk. The credit risk on bonds is limited as investments are made in highly liquid bonds with solid credit ratings. The table below shows Novo Nordisk's credit exposure on cash, fixed-income marketable securities and financial derivatives.

*Credit exposure on Cash at bank and on hand, Marketable securities and Derivative financial instruments (market value)*

DKK million	Cash at bank and on hand	Marketable securities <sup>1</sup>	Derivative financial instruments	Total
<b>2015</b>				
AAA-range		1,027		1,027
AA-range	6,797	2,513	133	9,443
A-range	9,959		171	10,130
BBB-range	101			101
Not rated or below BBB-range	66	2		68
<b>Total</b>	<b>16,923</b>	<b>3,542</b>	<b>304</b>	<b>20,769</b>
<b>2014</b>				
AAA-range		1,004		1,004
AA-range	6,501	502	20	7,023
A-range	7,641		10	7,651
BBB-range	183			183
Not rated or below BBB-range	71	3		74
<b>Total</b>	<b>14,396</b>	<b>1,509</b>	<b>30</b>	<b>15,935</b>

1. Net yield on the bond portfolio is -0.10% (+0.35% in 2014).

Novo Nordisk has no significant concentration of credit risk related to Trade receivables or Other receivables and prepayments, as the exposure is spread over a large number of counterparties and customers. Novo Nordisk continues to monitor the credit exposure in Region International Operations due to the increasing sales and low credit ratings of many countries in this region.

### Trade receivable programme

Novo Nordisk's Japanese and US subsidiaries employ trade receivable programmes where trade receivables are sold on a full non-recourse term to optimise working capital.

At year-end, the Group had derecognised receivables without recourse having due dates after 31 December amounting to:

DKK million	2015	2014	2013
Japan	1,899	1,669	1,685
US	945	0	0

In December 2015 Novo Nordisk initiated the programme in the US. The programme is expected to grow in size over the coming year, when a full year of trade receivables will be covered.

In addition, full non-recourse off-balance sheet factoring arrangement programmes are occasionally applied by Novo Nordisk affiliates around the world with limited impact on the Group's trade receivables.

Please refer to note 2.2 for the split of allowance for trade receivables by geographical segment.

## 4.3 DERIVATIVE FINANCIAL INSTRUMENTS

### Accounting policies

#### Use of derivative financial instruments

The derivative financial instruments are used to manage the exposure to market risk. None of the derivatives are held for trading.

Novo Nordisk uses forward exchange contracts and currency options to hedge forecast transactions, assets and liabilities. Currently, net investments in foreign subsidiaries are not hedged.

#### Initial recognition and measurement

On initiation of the contract, Novo Nordisk designates each derivative financial contract that qualifies for hedge accounting as one of:

- hedges of the fair value of a recognised asset or liability (fair value hedge)
- hedges of the fair value of a forecast financial transaction (cash flow hedge).

All contracts are initially recognised at fair value and subsequently remeasured at fair value at the end of the reporting period.

Gains and losses on currency options that do not meet the criteria for hedge accounting are recognised directly in the Income statement under Financial income or Financial expenses.

#### Fair value hedges

Value adjustments of fair value hedges are recognised in the Income statement along with any value adjustments of the hedged asset or liability that are attributable to the hedged risk.

#### Cash flow hedges

Value adjustments of the effective part of cash flow hedges are recognised directly in Other comprehensive income. The cumulative value adjustment of these contracts is transferred from Other comprehensive income to the Income statement under Financial income or Financial expenses when the hedged transaction is recognised in the Income statement. For options, this cumulative value adjustment is reflected in the value of the option.

#### Discontinuance of cash flow hedging

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the Income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the Income statement under Financial income or Financial expenses.

#### Fair value determination

The fair value of derivative financial instruments is measured on the basis of quoted market prices of financial instruments traded in active markets. If an active market exists, the fair value is based on the most recently observed market price at the end of the reporting period.

If a financial instrument is quoted in a market that is not active, Novo Nordisk bases its valuation on the most recent transaction price. Adjustment is made for subsequent changes in market conditions, for instance by including transactions in similar financial instruments assumed to be motivated by normal business considerations.

If an active market does not exist, the fair value of standard and simple financial instruments, such as foreign exchange forward contracts, interest rate swaps, currency swaps and unlisted bonds, is measured according to generally accepted valuation techniques. Market-based parameters are used to measure the fair value.



## 4.3 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

## HEDGING ACTIVITIES

DKK million	2015			2014		
	Contract amount at year-end	Positive fair value at year-end	Negative fair value at year-end	Contract amount at year-end	Positive fair value at year-end	Negative fair value at year-end
Forward contracts, cash flow hedges	41,630	202	911	32,095	10	2,252
Currency options, cash flow hedges <sup>1</sup>	5,533	66	—	2,429	29	—
Forward contracts, fair value hedges	2,753	59	471	3,490	—	355
<b>Total hedging activities</b>	<b>49,916</b>	<b>327</b>	<b>1,382</b>	<b>38,014</b>	<b>39</b>	<b>2,607</b>
Total fair value adjustments recognised in the Income statement		102	471		8	355
Total fair value adjustments recognised in Other comprehensive income <sup>2</sup>		225	911		31	2,252
Presented in the Balance sheet as:						
Derivative financial instruments (current assets)		304			30	
Derivative financial instruments (current liabilities)			1,382			2,607
Cash at bank		23			9	

1. Includes expired currency options of DKK 23 million deferred for realisation in 2016.

2. Realisation in 2015 of previously deferred loss amounts to DKK 2,216 million as the remaining DKK 5 million was not realised until 2016. Furthermore, an additional loss of DKK 681 million per 31 December 2015 is deferred for realisation in 2016.

## HEDGING OF FORECAST TRANSACTIONS (CASH FLOW HEDGE)

DKK million	2015			2014		
	Contract amount at year-end	Positive fair value at year-end	Negative fair value at year-end	Contract amount at year-end	Positive fair value at year-end	Negative fair value at year-end
<b>Hedging of forecast transactions qualifying for hedge accounting</b>						
USD	34,279	85	819	26,540	—	2,252
CNH, JPY, GBP and other currencies	7,351	117	92	5,555	10	—
<b>Total forward contracts (forecast cash flow)</b>	<b>41,630</b>	<b>202</b>	<b>911</b>	<b>32,095</b>	<b>10</b>	<b>2,252</b>
USD	5,285	20	—	2,051	—	—
JPY	248	3	—	378	21	—
<b>Total currency options (forecast cash flow)</b>	<b>5,533</b>	<b>23</b>	<b>—</b>	<b>2,429</b>	<b>21</b>	<b>—</b>
<b>Total cash flow hedges for which hedge accounting is applied</b>	<b>47,163</b>	<b>225</b>	<b>911</b>	<b>34,524</b>	<b>31</b>	<b>2,252</b>
<b>Other forecast transaction hedges for which hedge accounting is not applied</b>						
Currency options for which hedge accounting is not applied	—	43	—	—	8	—
<b>Total contracts for forecast transactions</b>	<b>47,163</b>	<b>268</b>	<b>911</b>	<b>34,524</b>	<b>39</b>	<b>2,252</b>

The above financial contracts are expected to impact the Income statement within the periods shown below. The split is based on an estimate of when the cash flow hedges are expected to be reclassified to fair value hedges, and the fair value thereby transferred to Financial income or Financial expenses.

DKK million	2015		2014	
	Positive fair value at year-end	Negative fair value at year-end	Positive fair value at year-end	Negative fair value at year-end
<b>Expected timing of Income statement impact</b>				
0–12 months	225	907	28	2,251
More than 12 months	—	4	3	1
<b>Total cash flow hedges for which hedge accounting is applied</b>	<b>225</b>	<b>911</b>	<b>31</b>	<b>2,252</b>



### 4.3 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

#### HEDGING OF ASSETS AND LIABILITIES (FAIR VALUE HEDGE)

DKK million	2015			2014		
	Contract amount at year-end	Positive fair value at year-end	Negative fair value at year-end	Contract amount at year-end	Positive fair value at year-end	Negative fair value at year-end
USD	1,891	42	400	2,367	—	333
JPY, GBP and other currencies	862	17	71	1,123	—	22
<b>Total fair value contracts</b>	<b>2,753</b>	<b>59</b>	<b>471</b>	<b>3,490</b>	<b>—</b>	<b>355</b>

The table above shows the fair value of fair value-hedging activities for 2015 and 2014. Value adjustments of fair value hedges are recognised in Financial income and Financial expenses along with any value adjustments to the hedged asset or liability that are attributable to the hedged risk. The changes in fair values recognised in the Income statement amount to a net loss of DKK 412 million in 2015 (a net loss of DKK 355 million in 2014).

The portfolio of fair value hedges also includes the recycled fair value of cash flow hedges as the hedged transactions are recognised as assets or liabilities at year-end.

The financial contracts existing at year-end hedge the currency exposure on assets and liabilities in the Group's major currencies excluding DKK and EUR. The contract amounts of other currencies at year-end are JPY at DKK 91 million (DKK 310 million in 2014), GBP at DKK 329 million (DKK 313 million in 2014), and 'other' comprising CAD at DKK 190 million (DKK 444 million in 2014) and AUD at DKK 252 million (DKK 56 million in 2014).

### 4.4 CASH AND CASH EQUIVALENTS, FINANCIAL RESOURCES AND FREE CASH FLOW

#### Accounting policies

The Statement of cash flows shows how income and changes in balance sheet items affect cash and cash equivalents, ie the cash generated or used in the period.

Cash from operating activities converts income statement items from the accrual basis of accounting to cash basis. As such, starting with net profit, non-cash items are reversed and actual payments included. Further, change in working capital is taken into account as this shows the development in money tied up in the balance sheet. Cash from investing activities shows payments related to the purchase and sale of Novo Nordisk's long-term investments. This includes fixed assets such as construction of new production sites, intangible assets such as patents and licences, and financial assets. Cash from financing activities reports purchase and sale of Novo Nordisk's own shares and payment of dividends.

Cash and cash equivalents consist of cash offset by short-term bank loans. Financial resources consist of cash and cash equivalents, marketable securities with original maturity of less than three months and undrawn committed credit facilities expiring after more than one year. The Statement of cash flows is presented in accordance with the indirect method commencing with Net profit for the year. Cash flows in foreign currencies are translated to DKK at the average exchange rate for the respective month.

DKK million	2015	2014	2013
<b>CASH AND CASH EQUIVALENTS</b>			
Cash at bank and on hand (note 4.2)	16,923	14,396	10,728
Current debt (bank overdrafts)	(1,073)	(720)	(215)
<b>Cash and cash equivalents at the end of the year</b>	<b>15,850</b>	<b>13,676</b>	<b>10,513</b>
<b>FINANCIAL RESOURCES</b>			
Cash and cash equivalents	15,850	13,676	10,513
Marketable securities (note 4.2)	3,542	1,509	3,741
Undrawn committed credit facility <sup>1</sup>	8,209	8,188	4,849
<b>Total financial resources</b>	<b>27,601</b>	<b>23,373</b>	<b>19,103</b>

1. The undrawn committed credit facility in 2015 is a EUR 1,100 million facility (EUR 1,100 million in 2014 and EUR 650 million in 2013) committed by a portfolio of international banks. The facility matures in 2019.

#### FREE CASH FLOW

DKK million	2015	2014	2013
Net cash generated from operating activities	38,287	31,692	25,942
Net cash used in investing activities	(6,098)	(2,064)	(2,773)
Net purchase of marketable securities	2,033	(2,232)	(811)
<b>Free cash flow<sup>2</sup></b>	<b>34,222</b>	<b>27,396</b>	<b>22,358</b>

2. Additional non-IFRS measure; please refer to p 94 for definitions.

### 4.5 CHANGE IN WORKING CAPITAL

#### Accounting policies

Working capital is defined as current assets less current liabilities and measures the liquid assets Novo Nordisk has available for the business.

#### CHANGE IN WORKING CAPITAL

DKK million	2015	2014	2013
Inventories	(1,401)	(1,805)	(9)
Trade receivables	(2,444)	(2,134)	(1,268)
Other receivables and prepayments	493	(296)	251
Trade payables	(23)	858	233
Other liabilities	1,604	1,665	404
Adjustment for the partial divestment of NNIT A/S	(207)	—	—
<b>Change in working capital before exchange rate adjustments</b>	<b>(1,978)</b>	<b>(1,712)</b>	<b>(389)</b>
Exchange rate adjustments	(179)	(436)	124
<b>Cash flow change in working capital</b>	<b>(2,157)</b>	<b>(2,148)</b>	<b>(265)</b>



## 4.6 OTHER NON-CASH ITEMS

For the purpose of presenting the Statement of cash flows, non-cash items with effect on the Income statement must be reversed to identify the actual cash flow effect from the Income statement. The adjustments are specified as follows:

### OTHER NON-CASH ITEMS

DKK million	2015	2014	2013
<i>Reversals of non-cash income statement items</i>			
Interest income and interest expenses, net (note 4.9)	11	(62)	(1)
Share-based payment costs (note 5.1)	442	371	409
<i>Changes in non-cash balance sheet items</i>			
Increase/(decrease) in provisions (note 3.6)	6,193	3,138	930
Increase/(decrease) in retirement benefit obligations (note 3.5)	155	343	(72)
Remeasurements of retirement benefit obligations (note 3.5)	(37)	(247)	54
<i>Other adjustments</i>			
(Gains)/losses from sale of property, plant and equipment	(2)	1	(1)
Result of associated company (note 4.8)	(14)	–	(17)
Exchange rate adjustments on working capital	179	436	(124)
Other, primarily exchange rate adjustment of provisions etc	(1,019)	183	(594)
<b>Total other non-cash items</b>	<b>5,908</b>	<b>4,163</b>	<b>584</b>

## 4.7 FINANCIAL ASSETS AND LIABILITIES

### Accounting policies

Depending on the purpose of each investment, Novo Nordisk classifies these into the following categories:

- Available-for-sale financial assets
- Loans and receivables
- Financial assets at fair value through the Income statement (derivatives).

Management determines the classification of its investments on initial recognition and re-evaluates this at the end of every reporting period to the extent that such a classification is permitted and required.

#### Recognition and measurement

Purchases and sales of investments are recognised on the settlement date. Investments are initially recognised at fair value.

Available-for-sale financial assets and financial assets at fair value are subsequently carried at fair value. Loans and receivables are carried at amortised cost based on the effective interest method.

Fair value disclosures are made separately for each class of financial instruments at the end of the reporting period.

#### Disposal of investments

Investments are removed from the balance sheet when the rights to receive cash flows from the investments have expired or have been transferred, and Novo Nordisk has transferred substantially all the risks and rewards of ownership.

#### Available-for-sale financial assets

Available-for-sale financial assets consist of equity investments and marketable securities. Equity investments are included in Other financial assets unless Management intends to dispose of the investment within 12 months of the end of the reporting period. If that is the case, the current part is included in Other receivables and prepayments.

Unrealised gains and losses arising from changes in the fair value of financial assets classified as available for sale are recognised in Other comprehensive income. When financial assets classified as available for sale are sold or impaired, the accumulated fair value adjustments are included in the Income statement.

The fair values of quoted investments (including marketable securities) are based on current bid prices at the end of the reporting period. Financial assets for which no active market exists are carried at fair value based on a valuation methodology or at cost if no reliable valuation model can be applied.

#### Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. If collection is expected within one year (or in the normal operating cycle of the business if longer), they are classified as Current assets. If not, they are presented as Non-current assets.

Trade receivables and Other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for allowance. Provision for allowance is made for Trade receivables when there is objective evidence that Novo Nordisk will not be able to collect all amounts due according to the original terms of the receivables.

The provision for allowance is deducted from the carrying amount of Trade receivables, and the amount of the loss is recognised in the Income statement under Sales and distribution costs. When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against Sales and distribution costs in the Income statement.



## 4.7 FINANCIAL ASSETS AND LIABILITIES (CONTINUED)

## FINANCIAL ASSETS BY CATEGORY

DKK million	Available-for-sale financial assets at fair value	Financial assets measured at fair value through the income statement	Loans and receivables	Cash and cash equivalents	Total
<b>2015</b>					
Other financial assets	737		602		1,339
Trade receivables (note 3.4)			15,485		15,485
Other receivables			2,257		2,257
– less prepayments			(879)		(879)
Marketable securities (bonds) (note 4.2)	3,542				3,542
Derivative financial instruments (note 4.3)		304			304
Cash at bank and on hand (note 4.4)				16,923	16,923
<b>Total financial assets at the end of the year by category<sup>1</sup></b>	<b>4,279</b>	<b>304</b>	<b>17,465</b>	<b>16,923</b>	<b>38,971</b>
Total financial assets at the end of the year by category, 2014	1,875	30	15,029	14,396	31,360

## FINANCIAL LIABILITIES BY CATEGORY

DKK million	Financial liabilities measured at fair value through the income statement	Financial liabilities measured at amortised cost	Financial liabilities measured at fair value through Other comprehensive income	Total
<b>2015</b>				
Current debt (note 4.4)		1,073		1,073
Trade payables		4,927		4,927
Other liabilities (note 3.7)		12,655		12,655
– less VAT and duties payable (note 3.7)		(896)		(896)
Derivative financial instruments (note 4.3)	1,382			1,382
<b>Total financial liabilities at the end of the year by category<sup>1</sup></b>	<b>1,382</b>	<b>17,759</b>	<b>–</b>	<b>19,141</b>
<b>2014</b>				
Current debt (note 4.4)		720		720
Trade payables		4,950		4,950
Other liabilities (note 3.7)		11,051		11,051
– less VAT and duties payable (note 3.7)		(744)		(744)
Derivative financial instruments (note 4.3)	2,607			2,607
<b>Total financial liabilities at the end of the year by category<sup>1</sup></b>	<b>2,607</b>	<b>15,977</b>	<b>–</b>	<b>18,584</b>

1. All financial assets and liabilities are due within one year.

For a description of the credit quality of financial assets such as Trade receivables, Cash at bank and on hand, Marketable securities, Current debt and Derivative financial instruments, refer to notes 4.2 and 4.3.

## FAIR VALUE MEASUREMENT HIERARCHY

DKK million	2015	2014
Active market data	4,279	1,870
Directly or indirectly observable market data	304	30
Not based on observable market data	–	5
<b>Total financial assets at fair value</b>	<b>4,583</b>	<b>1,905</b>
Active market data	–	–
Directly or indirectly observable market data	1,382	2,607
Not based on observable market data	–	–
<b>Total financial liabilities at fair value</b>	<b>1,382</b>	<b>2,607</b>

Financial assets and liabilities measured at fair value can be categorised using the fair value measurement hierarchy above. There have not been any transfers between the categories 'Active market data' and 'Directly or indirectly observable market data' during 2015 or 2014. There are no intangible assets or items of property, plant and equipment measured at fair value.



## 4.8 INVESTMENT IN ASSOCIATED COMPANY

### Accounting policies

#### Investments in associated companies

An associated company is an entity in which Novo Nordisk has significant influence, but not control, which in general will be when holding 20% to 50% of the voting rights. Such investment is accounted for using the equity method of accounting. The investment is adjusted by Novo Nordisk's share of the results after tax of the associated company.

Novo Nordisk's share of the results is recognised in the Income statement as financial items i.e. outside operating profit. The share of results will be recognised based on the associated company's full-year outlook, with adjustment for actual full-year result in the first quarter of the following year.

#### Disposal of subsidiaries

When Novo Nordisk ceases to have control over a subsidiary, the assets and liabilities of the subsidiary are removed from the Balance sheet. Any retained equity interest in the entity is revalued at fair value on the date when control is lost with the revaluation gain or loss being recognised in the Income statement.

The fair value revaluation is allocated to the entity's identifiable assets and liabilities, and any excess value is recognised as goodwill. The identified assets are amortised over their estimated useful life, and goodwill is subject to impairment testing.

### INVESTMENT IN ASSOCIATED COMPANY

DKK million	2015
Carrying amount of investment at the beginning of the period	—
Additions during the period	797
Share of profit/(loss), recognised in the Income statement	48
Amortisation of intangible assets	(34)
<b>Carrying amount of investment at the end of the year</b>	<b>811</b>

As a result of Novo Nordisk A/S's divestment of 74.5% of the shares in NNIT A/S on 6 March 2015, NNIT A/S has changed status from a subsidiary to an associated company of Novo Nordisk A/S. At the time of the disposal, the retained investment of 25.5% was revalued at fair value based on an active market price of DKK 125 per share. The revaluation value was allocated to identifiable assets such as order backlog and customer relationships, and the remaining part is classified as goodwill.

### INITIAL FAIR VALUE OF RETAINED INVESTMENT IN NNIT A/S

DKK million	2015
Carrying amount of 25.5% of net assets in NNIT A/S	153
Fair value revaluation of retained investment	644
<b>Initial fair value of investment in associated company</b>	<b>797</b>

The market value at 31 December 2015 of shareholdings in NNIT A/S amounts to DKK 1,202 million, based on a list price of DKK 189.

## 4.9 FINANCIAL INCOME AND EXPENSES

### Accounting policies

As described in note 4.2, Management has chosen to classify the result of hedging activities as part of financial items in the Income statement. Financial items are primarily related to foreign exchange elements and are mainly impacted by the cumulative value adjustment of cash flow hedges transferred from Other comprehensive income to the Income statement when the hedged transaction is recognised in the Income statement. Further, value adjustments of fair value hedges are recognised in Financial income and Financial expenses along with any value adjustments of the hedged asset or liability that are attributable to the hedged risk. Finally, value adjustments of assets and liabilities in non-hedged currencies will impact Financial income and Financial expenses.

### FINANCIAL INCOME

DKK million	2015	2014	2013
Interest income	56	101	56
Financial gain from forward contracts (net)	—	—	1,631
Financial gain from currency options (net)	—	32	—
Capital gain on investments etc.	15	34	—
Financial gain/(loss) from other financial assets	—	—	15
Result of associated company	14	—	—
<b>Total financial income</b>	<b>85</b>	<b>167</b>	<b>1,702</b>

### FINANCIAL EXPENSES

DKK million	2015	2014	2013
Interest expenses	67	39	55
Foreign exchange loss (net) <sup>1</sup>	504	288	435
Financial loss from forward contracts (net)	5,232	125	—
Financial loss from currency options (net)	162	—	50
Capital loss on investments etc.	—	—	20
Other financial expenses	81	111	96
<b>Total financial expenses</b>	<b>6,046</b>	<b>563</b>	<b>656</b>

1. Primarily related to trade receivables, other receivables and trade payables.

### FINANCIAL IMPACT FROM FORWARD CONTRACTS AND CURRENCY OPTIONS, SPECIFIED

DKK million	2015	2014	2013
<b>Forward contracts</b>			
Transferred from Other comprehensive income	(2,237)	1,104	809
Value adjustment of transferred contracts	(3,212)	(1,160)	678
Foreign exchange gain/loss on forward contracts	217	(69)	144
<b>Financial income/(expense) from forward contracts</b>	<b>(5,232)</b>	<b>(125)</b>	<b>1,631</b>
<b>Currency options</b>			
Transferred from Other comprehensive income	21	125	—
Value adjustment of transferred options	(12)	(12)	25
Foreign exchange gain/loss on currency options	(171)	(81)	(75)
<b>Financial income/(expense) from currency options</b>	<b>(162)</b>	<b>32</b>	<b>(50)</b>



## SECTION 5 OTHER DISCLOSURES

Basis of preparation

Results for the year

Operating assets  
and liabilitiesCapital structure and  
financing items

Other disclosures

This section provides details on notes that are statutory or by their nature of secondary importance for understanding the financial performance of

Novo Nordisk. A list of subsidiaries in the Novo Nordisk Group is also included here.

### 5.1 SHARE-BASED PAYMENT SCHEMES

#### Accounting policies

##### Share-based compensation

Novo Nordisk operates equity-settled, share-based compensation plans. The fair value of the employee services received in exchange for the grant of the options or shares is recognised as an expense and allocated over the vesting period.

The total amount to be expensed over the vesting period is determined by reference to the fair value of the options or shares granted, excluding the impact of any non-market vesting conditions. The fair value is fixed at the grant date. Non-market vesting conditions are included in assumptions about the number of options or shares that are expected to vest. At the end of each reporting period, Novo Nordisk revises its estimates of the number of shares expected to vest. Novo Nordisk recognises the impact of the revision of the original estimates, if any, in the Income statement and in a corresponding adjustment to Equity (change in proceeds) over the remaining vesting period. Adjustments relating to prior years are included in the Income statement in the year of adjustment.

#### SHARE-BASED PAYMENT

##### Expensed in the Income statement

DKK million	2015	2014	2013
Restricted stock units to employees	135	141	188
Long-term share-based incentive programme (Senior Management Board) <sup>1</sup>	108	66	51
Long-term share-based incentive programme (management group below Senior Management Board) <sup>2</sup>	199	164	170
<b>Share-based payment expensed in the Income statement</b>	<b>442</b>	<b>371</b>	<b>409</b>

1. Expense for the year reflects the full value at launch of the programme for the year.

2. Expense for the year reflects the value at launch of the last four programmes, amortised over four years.

##### Restricted stock units to employees

Following the 90th anniversary in 2013, all employees in the company (excl NNE Pharmaplan) were offered 100 restricted stock units. A restricted stock unit gives the right to receive one Novo Nordisk B share free of charge on 1 April 2016 subject to continued employment and average sales growth of at least 5% per year measured in DKK in the period 2012–2015. The cost of the DKK 440 million programme is amortised over the period 2013–2016 at an annual amount of DKK 135 million. As the sales growth has been achieved, the shares will be granted to the employees on 1 April 2016.

#### Long-term share-based incentive programme

For a description of the programme, please refer to 'Remuneration' in 'Governance, leadership and shares', pp 49–51.

##### Senior Management Board

On 2 February 2016, the Board of Directors approved the establishment, of a joint pool for the financial year 2015 by allocating a total of 378,943 Novo Nordisk B shares. This allocation amounts on average to 12 months' fixed base salary plus pension contribution for the CEO, 9 months' fixed base salary plus pension contribution per member of Executive Management as per 1 March 2015 and 8 months' fixed base salary for Senior Vice Presidents, corresponding to a value at launch of the programme of DKK 108 million. This amount was expensed in 2015. The share price used for the conversion was the average share price (DKK 285) for Novo Nordisk B shares on NASDAQ Copenhagen in the period 30 January – 13 February 2015. Based on the split of participants when the joint pool was established, approximately 50% of the pool will be allocated to members of Executive Management and 50% to other members of the Senior Management Board.

The shares allocated to the joint pool for 2012 were released to the individual participants subsequent to the approval of the Annual Report 2015 by the Board of Directors and after the announcement of the 2015 full-year financial results on 3 February 2016. The shares allocated correspond to a value at launch of the programme of DKK 73 million, expensed in 2012.

##### Management group below Senior Management Board

The management group below the Senior Management Board has a share-based incentive programme with similar performance criteria. For 2015, a total of 879,988 shares were allocated to the pool for this group corresponding to a value at launch of the programme of DKK 251 million.

The shares allocated to the pool for 2012 were released to the individual participants subsequent to the approval of the Annual Report 2015 by the Board of Directors and after the announcement of the 2015 full-year financial results on 3 February 2016. The shares allocated correspond to a value at launch of the programme of DKK 234 million amortised over the period 2012–2015. The number of shares to be transferred (1,355,153 shares) is lower than the original number of shares allocated to the share pool as some participants had left the company before the release conditions of the programme were met.



## 5.1 SHARE-BASED PAYMENT SCHEMES (CONTINUED)

## OUTSTANDING RESTRICTED STOCK UNITS

	2015	2014
Outstanding at the beginning of the year	7,960,080	10,528,372
Released restricted stock units to employees	0	(24,500)
Released shares from 2011 Management pools <sup>1</sup>	(1,787,640)	(3,341,692)
Released shares from 2012–2014 management pools <sup>2</sup>	(120,638)	
Cancelled shares from Management pool <sup>1</sup>	(152,097)	(178,872)
Shares allocated to Management pools	1,258,931	976,772
<b>Outstanding at the end of the year</b>	<b>7,158,636</b>	<b>7,960,080</b>

1. Includes 10,000 shares released and 2,190 shares cancelled related to Management pools from previous years.

2. Realised 2012–2014 programme following the partial divestment of NNIT A/S.

## EXERCISABLE SHARE OPTIONS

	2015	2014
Exercisable at the beginning of the year	955,570	2,801,920
Exercised	(930,570) <sup>1</sup>	(1,787,350)
Cancelled	(25,000)	(59,000)
<b>Exercisable at the end of the year</b>	<b>0</b>	<b>955,570<sup>2</sup></b>

1. For exercised share options, the average market price of Novo Nordisk B shares for the trading period 30 January to 13 February 2015 was DKK 285 per share.

2. Average exercise price per option (excluding restricted stock units) amounted to DKK 35 in 2014, and calculated fair value per option amounted to DKK 225 in 2014.

## OUTSTANDING RESTRICTED STOCK UNITS

	Issued <sup>1</sup>	Released <sup>2</sup>	Cancelled (accumulated)	Outstanding	Value at launch date DKK million	Vesting date
<b>Restricted stock units to employees</b>						
2013 Restricted stock units	2,370,000	–	–	2,370,000		1/04/16
Outstanding restricted stock units to employees at the end of 2015	2,370,000	–	–	2,370,000		
<b>Shares allocated to joint pools for Senior Management Board</b>						
2011 Shares allocated to joint pool	448,560	(448,560)	–	0	57	Q1 2015
2012 Shares allocated to joint pool	487,730	(10,435)	–	477,295	73	Q1 2016
2013 Shares allocated to joint pool	254,513	(8,993)	–	245,520	51	Q1 2017
2014 Shares allocated to joint pool	293,044	(9,369)	–	283,675	66	Q1 2018
2015 Shares allocated to joint pool <sup>3</sup>	378,943	–	–	378,943	108	Q1 2019
Outstanding shares in joint pool for Senior Management Board	1,862,790	(477,357)	–	1,385,433		
<b>Shares allocated to pools for management group below Senior Management Board</b>						
2011 Shares allocated to pool	1,485,665	(1,329,080)	(156,585)	0	188	Q1 2015
2012 Shares allocated to pool	1,559,235	(35,160)	(168,922)	1,355,153	234	Q1 2016
2013 Shares allocated to pool	622,190	(22,620)	(54,701)	544,869	126	Q1 2017
2014 Shares allocated to pool	683,728	(34,061)	(26,474)	623,193	155	Q1 2018
2015 Shares allocated to pool <sup>3</sup>	879,988	–	–	879,988	251	Q1 2019
Outstanding shares in pool for management group below Senior Management Board	5,230,806	(1,420,921)	(406,682)	3,403,203		
<b>Outstanding at the end of 2015</b>	<b>9,463,596</b>	<b>(1,898,278)</b>	<b>(406,682)</b>	<b>7,158,636</b>		

1. All restricted stock units and shares allocated to Management pools are hedged by treasury shares.

2. Released shares from 2012 to 2014 Management pools relates to NNIT A/S employees following the Initial Public Offering of NNIT A/S.

3. 2015 programme released subsequent to approval of the Annual Report 2015 on 2 February 2016. The programme includes former members of Senior Management Board with a total value of DKK 16.2 million.



## 5.2 MANAGEMENT'S HOLDINGS OF NOVO NORDISK SHARES

The internal rules for trading in Novo Nordisk securities by board members, executives and certain employees only permit trading in the 15-calendar-day period following each quarterly announcement.

MANAGEMENT'S HOLDING OF SHARES	At the beginning of the year <sup>1</sup>	Additions during the year	Sold/transferred during the year	At the end of the year	Market value <sup>2</sup> DKK million
Göran Ando	13,000			13,000	5.2
Bruno Angelici	2,500			2,500	1.0
Jeppe Christiansen	–	3,529		3,529	1.4
Liz Hewitt	2,725			2,725	1.1
Liselotte Hyveled	3,855	2,030	(937)	4,948	2.0
Thomas Paul Koestler	16,000	2,000		18,000	7.2
Anne Marie Kverneland	11,099		(628)	10,471	4.2
Sylvie Grégoire	–	875		875	0.3
Søren Thuesen Pedersen	1,615			1,615	0.6
Eivind Kolding	–	3,850		3,850	1.5
Stig Strøbæk	1,950			1,950	0.8
Mary Szela	–	935		935	0.4
<b>Board of Directors in total</b>	<b>52,744</b>	<b>13,219</b>	<b>(1,565)</b>	<b>64,398</b>	<b>25.7</b>
Lars Rebie Sørensen	354,850	37,515		392,365	156.9
Jesper Brandgaard	186,205	25,010	(25,010)	186,205	74.5
Maziar Mike Doustdar	13,815	4,065		17,880	7.2
Lars Fruergaard Jørgensen	95,855	12,505	(7,000)	101,360	40.5
Jerzy Gruhn	2,600	47,505	(4,500)	45,605	18.2
Jesper Høiland	60,015	12,505		72,520	29.0
Jakob Riis	72,145	12,505		84,650	33.9
Mads Krogsgaard Thomsen	279,135	26,830	(25,610)	280,355	112.1
Henrik Wulff	64,105	12,505	(2,800)	73,810	29.5
<b>Executive Management in total</b>	<b>1,128,725</b>	<b>190,945</b>	<b>(64,920)</b>	<b>1,254,750</b>	<b>501.8</b>
<b>Other members of the Senior Management Board</b>	<b>554,337</b>	<b>242,570</b>	<b>(95,690)</b>	<b>701,217</b>	<b>280.4</b>
<b>Joint pool for Executive Management and other members of the Senior Management Board<sup>3</sup></b>	<b>1,110,309</b>	<b>329,309</b>	<b>(347,898)</b>	<b>1,091,720<sup>4</sup></b>	<b>436.6</b>
<b>Total</b>	<b>2,846,115</b>	<b>776,043</b>	<b>(510,073)</b>	<b>3,112,085</b>	<b>1,244.5</b>

1. Following the change in the Board of Directors and the retirement of members of Executive Management and the Senior Management Board, the holding of shares at the beginning of the year has been updated compared with the Annual Report 2014.

2. Calculation of the market value is based on the quoted share price of DKK 399.90 at the end of the year.

3. The annual allocation to the joint pool is locked up for three years before it is transferred to the participants employed at the end of each three-year period. Based on the split of participants when the joint pool was established, approximately 50% of the pool will be allocated to the members of Executive Management and approximately 50% to other members of the Senior Management Board. In the lock-up period, the joint pool may potentially be reduced in the event of lower-than-planned value creation in subsequent years.

4. Joint pool includes the 2012 programme released on 2 February 2016 and excludes 293,713 shares assigned to retired Executive Management and Senior Management Board members.



## 5.3 COMMITMENTS

### Commitments

Total contractual obligations and recognised non-current debt can be specified as follows (payments due by period):

#### 2015

DKK million	Within 1 year	1–3 years	3–5 years	More than 5 years	Total
Retirement benefit obligations	71	134	118	863	1,186
<i>Total non-current liabilities recognised in the Balance sheet</i>	<i>71</i>	<i>134</i>	<i>118</i>	<i>863</i>	<i>1,186</i>
Operating leases <sup>1</sup>	1,084	1,631	1,248	2,390	6,353
Purchase obligations	4,421	1,769	795	112	7,097
Research and development obligations	1,586	691	180	–	2,457
<i>Total obligations not recognised in the Balance sheet</i>	<i>7,091</i>	<i>4,091</i>	<i>2,223</i>	<i>2,502</i>	<i>15,907</i>
<b>Total contractual obligations</b>	<b>7,162</b>	<b>4,225</b>	<b>2,341</b>	<b>3,365</b>	<b>17,093</b>

#### 2014

DKK million	Within 1 year	1–3 years	3–5 years	More than 5 years	Total
Retirement benefit obligations	52	98	88	793	1,031
<i>Total non-current liabilities recognised in the Balance sheet</i>	<i>52</i>	<i>98</i>	<i>88</i>	<i>793</i>	<i>1,031</i>
Operating leases <sup>1</sup>	1,060	1,613	1,260	2,356	6,289
Purchase obligations	2,175	1,551	1,061	–	4,787
Research and development obligations	1,896	1,490	305	–	3,691
<i>Total obligations not recognised in the Balance sheet</i>	<i>5,131</i>	<i>4,654</i>	<i>2,626</i>	<i>2,356</i>	<i>14,767</i>
<b>Total contractual obligations</b>	<b>5,183</b>	<b>4,752</b>	<b>2,714</b>	<b>3,149</b>	<b>15,798</b>

1. No material finance lease obligations exist in 2015 and 2014.

The operating lease commitments are related to non-cancellable operating leases primarily for premises, company cars and office equipment. Approximately 78% of the commitments are related to leases outside Denmark. The lease costs for 2015 and 2014 were DKK 1,293 million and DKK 1,310 million respectively.

The purchase obligations primarily relate to purchase agreements regarding medical equipment and consumer goods. Novo Nordisk expects to fund these commitments with existing cash and cash flow from operations.

Research and development obligations entail uncertainties in relation to the period in which payments are due because a proportion of the obligations are dependent on milestone achievements. The due periods disclosed are based on Management's best estimate. Novo Nordisk has engaged in research and development projects with a number of external enterprises. Most of these obligations relate to the cardiovascular outcomes study for Tresiba®, the DEVOTE programme.

DKK million	2015	2014
<b>Other guarantees</b>	<b>748</b>	<b>960</b>
Other guarantees primarily relate to guarantees issued by Novo Nordisk in relation to rented property		
<b>Security for debt</b>	<b>78</b>	<b>237</b>
Land, buildings and equipment etc at carrying amount		

#### World Diabetes Foundation (WDF)

At the Annual General Meeting in 2008, a new donation was agreed to by the shareholders. According to this agreement, Novo Nordisk is obliged to make annual donations to the Foundation in the period 2011–2017 of 0.125% of the net insulin sales of the Group in the preceding financial year.

The annual donation in the period 2012–2017 will not exceed the lower of DKK 80 million or 15% of the taxable income of Novo Nordisk A/S in the financial year in question.

In 2015, the donation amounts to DKK 78 million (DKK 66 million in 2014 and DKK 64 million in 2013), which is recognised in Administrative costs in the Income statement.

#### Disclosure regarding change of control

The EU Takeover Bids Directive, as partially implemented by the Danish Financial Statements Act, contains certain rules relating to listed companies on disclosure of information that may be of interest to the market and potential takeover bidders, in particular in relation to disclosure of change of control provisions.

The company's A shares are not listed and are held by Novo A/S, a Danish public limited liability company wholly owned by the Novo Nordisk Foundation. According to the Articles of Association of the Foundation, the A shares cannot be divested. For information on the ownership structure of Novo Nordisk, please refer to 'Shares and capital structure' on pp 44–45. For information on change of control clauses in share option programmes, please refer to note 5.1, 'Share-based payment schemes', and in relation to employee contracts for Executive Management of Novo Nordisk, please refer to 'Remuneration' on pp 49–51.

In addition, Novo Nordisk discloses that the Group does not have any significant agreements to which the Group is a party and which take effect, alter or terminate upon a change of control of the Group following implementation of a takeover bid.



## 5.4 RELATED PARTY TRANSACTIONS

Novo Nordisk A/S is controlled by Novo A/S (incorporated in Denmark), which owns 27.0% of the share capital in Novo Nordisk A/S, representing 75.0% of the total number of votes, excluding treasury shares. The remaining shares are widely held. The ultimate parent of the Group is the Novo Nordisk Foundation (incorporated in Denmark). Both entities are considered related parties.

Being an associated company of Novo Nordisk A/S, NNIT A/S is considered a related party. Other related parties are considered to be the Novozymes Group and Xellia Pharmaceuticals due to joint ownership, associated companies and Management of Novo Nordisk A/S.

Novo Nordisk A/S did not acquire new B shares from Novo A/S in 2014 or 2015.

In 2013, Novo Nordisk A/S acquired 12,750,000 B shares, worth DKK 2.5 billion, from Novo A/S as part of the DKK 14.0 billion share repurchase programme. The transaction price was DKK 196.4 per share and was calculated as the average market price from 1 May to 3 May 2013 in the open window following the announcement of the financial results for the first quarter of 2013.

The Group has had the following material transactions with related parties, (income)/expense:

DKK million	2015	2014	2013
<b>Novo Nordisk Foundation</b>			
Donations to Steno Diabetes Center A/S via Novo Nordisk	(69)	(51)	(45)
Services provided by Novo Nordisk	(3)	–	–
<b>Novo A/S</b>			
Services provided by Novo Nordisk	(3)	(5)	(4)
Purchase of Novo Nordisk B shares	–	–	2,504
Sale of NNIT A/S B shares	(797)	–	–
<b>NNIT A/S<sup>1</sup></b>			
Services provided by Novo Nordisk	(32)	–	–
Services provided by NNIT A/S	1,316	–	–
<b>Novozymes</b>			
Services provided by Novo Nordisk	(185)	(189)	(214)
Services provided by Novozymes	165	142	109
<b>Xellia Pharmaceuticals</b>			
Services provided by Novo Nordisk	(11)	(28)	–

1. Amounts stated for 2015 regard services provided during the entire year. Before the partial divestment of NNIT A/S in March 2015 NNIT A/S was consolidated as a fully owned subsidiary.

There have not been any transactions with the Board of Directors or Executive Management of NNIT A/S, Novo Nordisk A/S, Novozymes A/S, Novo A/S, the Novo Nordisk Foundation, Xellia Pharmaceuticals ApS or associated companies. For information on remuneration to the Management of Novo Nordisk, please refer to 'Remuneration' on pp 49–51 and note 2.4, 'Employee costs'. There have not been and are no loans to the Board of Directors or Executive Management in 2015, 2014 or 2013.

There are no material unsettled transactions with related parties at the end of the year.

## 5.5 FEE TO STATUTORY AUDITORS

DKK million	2015	2014	2013
Statutory audit	24	24	24
Audit-related services	4	4	4
Tax advisory services	8	8	11
Other services	7	11	5
<b>Total fee to statutory auditors</b>	<b>43</b>	<b>47</b>	<b>44</b>



## 5.6 COMPANIES IN THE NOVO NORDISK GROUP

Activity: ● Sales and marketing ● Production ● Research and development ● Services/investments

Company and country	Percentage of shares owned	Activity	Company and country	Percentage of shares owned	Activity
<b>Parent company</b>			<b>International Operations</b>		
Novo Nordisk A/S, Denmark	—	● ● ● ●	Aldaph SpA, Algeria	100	● ●
<b>Subsidiaries by region</b>			Novo Nordisk Pharma Argentina S.A., Argentina	100	●
<b>Europe</b>			Novo Nordisk Pharmaceuticals Pty. Ltd., Australia	100	●
Novo Nordisk Pharma GmbH, Austria	100	●	Novo Nordisk Pharma (Private) Limited, Bangladesh	100	●
S.A. Novo Nordisk Pharma N.V., Belgium	100	●	Novo Nordisk Produção Farmacêutica do Brasil Ltda., Brazil	100	●
Novo Nordisk Pharma d.o.o., Bosnia-Herzegovina	100	●	Novo Nordisk Farmacêutica do Brasil Ltda., Brazil	100	●
Novo Nordisk Pharma EAD, Bulgaria	100	●	Novo Nordisk Farmacêutica Limitada, Chile	100	●
Novo Nordisk Hrvatska d.o.o., Croatia	100	●	Novo Nordisk Colombia SAS, Colombia	100	●
Novo Nordisk s.r.o., Czech Republic	100	●	Novo Nordisk Pharma Operations A/S, Denmark	100	● ●
Novo Nordisk Pharmatech A/S, Denmark	100	● ●	Novo Nordisk Region International Operations A/S, Denmark	100	● ●
Novo Nordisk Region Europe A/S, Denmark	100	●	Novo Nordisk Egypt LLC, Egypt	100	●
Steno Diabetes Center A/S, Denmark	100	● ●	Novo Nordisk India Private Limited, India	100	●
Novo Nordisk Farma OY, Finland	100	●	Novo Nordisk Service Centre (India) Pvt. Ltd., India	100	●
Novo Nordisk, France	100	●	PT. Novo Nordisk Indonesia, Indonesia	100	●
Novo Nordisk Production SAS, France	100	●	Novo Nordisk Pars, Iran	100	●
Novo Nordisk Pharma GmbH, Germany	100	●	Novo Nordisk Ltd, Israel	100	●
Novo Nordisk Hellas Epe., Greece	100	●	Novo Nordisk Pharma SARL, Lebanon	100	●
Novo Nordisk Hungária Kft., Hungary	100	●	Novo Nordisk Pharma (Malaysia) Sdn Bhd, Malaysia	100	●
Novo Nordisk Limited, Ireland	100	●	Novo Nordisk Pharma Operations (BASEA) Sdn Bhd, Malaysia	100	● ●
Novo Nordisk S.P.A., Italy	100	●	Novo Nordisk Mexico S.A. de C.V., Mexico	100	●
UAB Novo Nordisk Pharma, Lithuania	100	●	Novo Nordisk Servicios Profesionales S.A. de C.V., Mexico	100	● ●
Novo Nordisk Farma dooel, Macedonia	100	●	Novo Nordisk Farmacêutica S.A. de C.V., Mexico	100	● ●
Novo Nordisk B.V., Netherlands	100	●	Novo Nordisk Pharma SAS, Morocco	100	●
Novo Nordisk Scandinavia AS, Norway	100	●	Novo Nordisk Pharmaceuticals Ltd., New Zealand	100	●
Novo Nordisk Pharmaceutical Services Sp. z o.o., Poland	100	●	Novo Nordisk Pharma Limited, Nigeria	100	●
Novo Nordisk Comércio Produtos Farmacêuticos Lda., Portugal	100	●	Novo Nordisk Pharma (Private) Limited, Pakistan	100	●
Novo Nordisk Farma S.R.L., Romania	100	●	Novo Nordisk Pharmaceuticals (Philippines) Inc., Philippines	100	●
Novo Nordisk Pharma d.o.o. Belgrade (Serbia), Serbia	100	●	Novo Nordisk Limited Liability Company, Russia	100	●
Novo Nordisk Slovakia s.r.o., Slovakia	100	●	Novo Nordisk Production Support LLC, Russia	100	● ●
Novo Nordisk, d.o.o., Slovenia	100	●	Novo Investment Pte Limited, Singapore	100	● ●
Novo Nordisk Pharma S.A., Spain	100	●	Novo Nordisk Pharma (Singapore) Pte Ltd., Singapore	100	●
Novo Nordisk Scandinavia AB, Sweden	100	●	Novo Nordisk (Pty) Limited, South Africa	100	●
Novo Nordisk Health Care AG, Switzerland	100	● ●	Novo Nordisk Region International Operations AG, Switzerland	100	● ●
Novo Nordisk Pharma AG, Switzerland	100	●	Novo Nordisk Pharma (Thailand) Ltd., Thailand	49	●
Novo Nordisk Holding Limited, United Kingdom	100	●	Novo Nordisk Tunisie SARL, Tunisia	100	●
Novo Nordisk Limited, United Kingdom	100	●	Novo Nordisk Sağlık Ürünleri Tic. Ltd. Sti., Turkey	100	●
<b>North America</b>			Novo Nordisk Pharma Gulf FZ-LLC, United Arab Emirates	100	●
Novo Nordisk Canada Inc., Canada	100	●	Novo Nordisk Venezuela Casa de Representación C.A., Venezuela	100	●
Novo Nordisk Invest 3 A/S, Denmark	100	●	<b>Region China</b>		
Novo Nordisk US Bio Production, Inc., United States	100	● ●	Novo Nordisk (China) Pharmaceuticals Co., Ltd., China	100	● ●
Novo Nordisk US Holdings Inc., United States	100	● ●	Beijing Novo Nordisk Pharmaceuticals Science & Technology Co., Ltd., China	100	● ●
Novo Nordisk Pharmaceutical Industries Inc., United States	100	● ●	Novo Nordisk Region China A/S, Denmark	100	● ●
Novo Nordisk Inc., United States	100	● ●	Novo Nordisk Hong Kong Limited, Hong Kong	100	●
Novo Nordisk Research Center Indianapolis, Inc., United States	100	● ●	Novo Nordisk Pharma (Taiwan) Ltd., Taiwan	100	●
<b>Japan &amp; Korea</b>			<b>Other subsidiaries and associated companies</b>		
Novo Nordisk Region Japan & Korea A/S, Denmark	100	● ●	NNIT A/S, Denmark	25.5	● ●
Novo Nordisk Pharma Ltd., Japan	100	● ●	NNE Pharmaplan A/S <sup>1</sup> , Denmark	100	● ●
Novo Nordisk Pharma Korea Ltd., South Korea	100	●	1. In addition to the companies listed above, NNE Pharmaplan A/S has its own subsidiaries.		



## 5.7 FINANCIAL DEFINITIONS

### ADR

An American Depositary Receipt (or ADR) represents ownership in the shares of a non-US company and trades in US financial markets.

### Basic earnings per share (EPS)

Net profit divided by the average number of shares outstanding.

### Diluted earnings per share

Net profit divided by average number of shares outstanding, including the dilutive effect of the outstanding restricted stock units.

### Effective tax rate

Income taxes as a percentage of profit before income taxes.

### Equity ratio

Total equity at year-end as a percentage of total assets at year-end.

### Gross margin

Gross profit as a percentage of sales.

### Net profit margin

Net profit as a percentage of sales.

### Number of shares outstanding

The total number of shares, excluding the holding of treasury shares.

### Operating margin

Operating profit as a percentage of sales.

### Other comprehensive income (OCI)

Other comprehensive income comprises all items recognised in Equity for the year other than those related to transactions with owners of the company. Examples of items that are required to be presented in OCI are:

- Exchange rate adjustments of investments in subsidiaries
- Remeasurements of defined benefit plans
- Changes in fair value of financial instruments in a cash flow hedge.

### Payout ratio

Total dividends for the year as a percentage of net profit.

### Return on equity (ROE)

Net profit for the year as a percentage of shareholders' equity (average).

### Non-IFRS financial measures

In the Annual Report, Novo Nordisk discloses certain financial measures of the Group's financial performance, financial position and cash flows that reflect adjustments to the most directly comparable measures calculated and presented in accordance with IFRS. These non-IFRS financial measures may not be defined and calculated by other companies in the same manner, and may thus not be comparable with such measures.

The non-IFRS financial measures presented in the Annual Report are:

- Cash to earnings
- Financial resources at the end of the year
- Free cash flow
- Operating profit after tax to net operating assets
- Underlying sales growth in local currencies.

### Cash to earnings

Cash to earnings is defined as 'free cash flow as a percentage of net profit'.

### Financial resources at the end of the year

Financial resources at the end of the year is defined as the sum of cash and cash equivalents at the end of the year, bonds with original term to maturity exceeding three months and undrawn committed credit facilities.

### Free cash flow

Novo Nordisk defines free cash flow as 'net cash generated from operating activities' less 'net cash used in investing activities' excluding 'net change in marketable securities'.

### Net asset value per share

Defined as the company value per share, calculated by dividing the total net asset value of Novo Nordisk A/S by the number of shares outstanding.

### Operating profit after tax to net operating assets (OPAT/NOA)

Operating profit after tax to net operating assets is defined as 'operating profit after tax (using the effective tax rate) as a percentage of average inventories, receivables, property, plant and equipment, intangible assets and deferred tax assets less non-interest-bearing liabilities including provisions and deferred tax liabilities (where average is the sum of the above assets and liabilities at the beginning of the year and at year-end divided by two)'.

### Underlying sales growth in local currencies

Underlying sales growth in local currencies is defined as sales for the year measured at prior-year average exchange rates compared with sales for the prior year measured at prior-year average exchange rates.



## QUARTERLY FINANCIAL FIGURES 2014 AND 2015

DKK million	2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Net sales	20,343	21,629	22,249	24,585	25,200	27,059	26,792	28,876
Sales by business segment:								
New-generation insulin	80	141	175	262	271	330	376	461
Modern insulin (insulin analogues)	9,377	10,351	10,641	11,168	11,498	12,604	12,500	13,562
Human insulin	2,573	2,475	2,478	2,772	2,897	2,784	2,772	2,778
Victoza®	2,916	3,059	3,441	4,010	3,957	4,486	4,680	4,904
Other diabetes and obesity care	1,013	1,031	953	1,064	1,195	1,075	1,223	1,237
Diabetes and obesity care total	15,959	17,057	17,688	19,276	19,818	21,279	21,551	22,942
Haemophilia	2,255	2,327	2,112	2,610	2,734	2,757	2,371	2,785
Norditropin®	1,500	1,509	1,686	1,811	1,830	2,083	1,842	2,065
Other biopharmaceuticals	629	736	763	888	818	940	1,028	1,084
Biopharmaceuticals total	4,384	4,572	4,561	5,309	5,382	5,780	5,241	5,934
Sales by geographical segment:								
North America	9,265	10,561	11,133	12,164	12,455	14,325	14,415	15,662
Europe	4,703	4,989	5,045	5,413	4,977	5,222	5,200	5,399
International Operations	3,032	2,968	2,938	3,602	3,684	3,884	3,406	3,992
Region China	2,171	1,947	1,881	2,089	2,847	2,284	2,415	2,325
Japan & Korea	1,172	1,164	1,252	1,317	1,237	1,344	1,356	1,498
Gross profit	16,877	17,958	18,823	20,586	21,326	23,200	22,945	24,268
Sales and distribution costs	5,086	5,559	5,899	6,679	6,147	7,175	6,951	8,039
Research and development costs	3,168	3,075	3,654	3,865	3,250	3,035	3,289	4,034
Hereof costs related to discontinuation of activities within inflammatory disorders	–	–	600	–	–	–	–	–
Administrative costs	805	795	870	1,067	854	887	952	1,164
Other operating income, net	215	204	169	182	2,782	379	227	94
Non-recurring income from the partial divestment of NNIT A/S	–	–	–	–	2,376	–	–	–
Operating profit	8,033	8,733	8,569	9,157	13,857	12,482	11,980	11,125
Net financials	268	256	(115)	(805)	(1,372)	(1,934)	(1,844)	(811)
Profit before income taxes	8,301	8,989	8,454	8,352	12,485	10,548	10,136	10,314
Income taxes	1,843	1,995	1,954	1,823	2,609	2,205	1,753	2,056
Net profit	6,458	6,994	6,500	6,529	9,876	8,343	8,383	8,258
Depreciation, amortisation and impairment losses	657	667	1,183	928	663	648	633	1,015
Total assets	63,241	63,681	71,283	77,062	77,457	81,313	85,195	91,799
Total equity	33,583	36,661	37,967	40,294	32,108	39,111	43,109	46,969
<b>FINANCIAL RATIOS</b>								
As percentage of sales								
Sales and distribution costs	25.0%	25.7%	26.5%	27.2%	24.4%	26.5%	25.9%	27.8%
Research and development costs	15.6%	14.2%	16.4%	15.7%	12.9%	11.2%	12.3%	14.0%
Administrative costs	4.0%	3.7%	3.9%	4.3%	3.4%	3.3%	3.6%	4.0%
Gross margin <sup>1</sup>	83.0%	83.0%	84.6%	83.7%	84.6%	85.7%	85.6%	84.0%
Operating margin <sup>1</sup>	39.5%	40.4%	38.5%	37.2%	55.0%	46.1%	44.7%	38.5%
Equity ratio <sup>1</sup>	53.1%	57.6%	53.3%	52.3%	41.5%	48.1%	50.6%	51.2%
<b>SHARE RATIOS</b>								
Basic earnings per share/ADR (in DKK) <sup>1</sup>	2.44	2.66	2.49	2.51	3.80	3.24	3.27	3.25
Diluted earnings per share/ADR (in DKK)	2.43	2.66	2.47	2.51	3.79	3.23	3.26	3.24
Average number of shares outstanding (million) – basic	2,642	2,629	2,614	2,600	2,597	2,578	2,566	2,553
Average number of shares outstanding (million) – diluted	2,653	2,637	2,622	2,608	2,604	2,584	2,572	2,560
<b>EMPLOYEES</b>								
Number of full-time employees at the end of the period	39,579	40,226	40,700	40,957	39,062	39,658	40,261	40,638

1. For definitions, please refer to p 94.



# STATEMENT OF SOCIAL PERFORMANCE

## FOR THE YEAR ENDED 31 DECEMBER

	Note	2015	2014	2013
<b>PATIENTS</b>				
Patients reached with Novo Nordisk diabetes care products (estimate in million)	2.1	26.8	24.4	24.3
Least developed countries where Novo Nordisk sells insulin according to the differential pricing policy	2.2	23	32	35
Donations (DKK million)	2.3	97	84	83
Animals purchased for research	2.4	67,240	64,533	72,662
New patent families (first filings)	2.5	77	93	77
<b>EMPLOYEES</b>				
Employees (total)	3.1	41,122 <sup>1</sup>	41,450	38,436
Employee turnover	3.1	9.2%	9.0%	8.1%
Working the Novo Nordisk Way (scale 1–5)		4.3	4.3	4.4
Gender in Management (men/women)	3.1	59%/41%	60%/40%	61%/39%
Frequency of occupational accidents (number/million working hours)	3.2	3.0	3.2	3.5
<b>ASSURANCE</b>				
Relevant employees trained in business ethics		98%	98%	97%
Business ethics reviews		49	42	45
Fulfilment of action points from facilitations of the Novo Nordisk Way	4.1	94%	95%	96%
Supplier audits	4.2	240	224	221
Product recalls	4.3	2	2	6
Failed inspections	4.4	0	0	0
Company reputation (scale 0–100)	4.5	82.4	80.8	82.9 <sup>2</sup>

1. 2015 data exclude employees in NNIT A/S, which was divested in 2015.

2. Data for people with diabetes and employees are not included due to lack of availability.



## NOTES PATIENTS, EMPLOYEES AND ASSURANCE

Basis of preparation

Patients

Employees

Assurance

In the Consolidated social statement, Novo Nordisk reports on three dimensions of performance: patients, employees and assurance. Progress is reported on two long-term targets: reach more patients with diabetes care products and ensure that the organisation is working the Novo Nordisk Way.

To support the long-term targets the social statement contains additional performance information of strategic importance, such as least developed countries buying insulin according to the differential pricing policy, employee turnover, gender diversity, training of employees in business ethics, supplier audits and product quality.

### Access to quality care

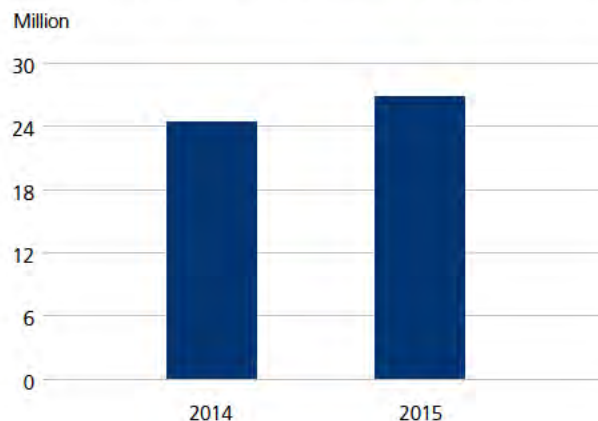
Novo Nordisk's long-term target to reach 40 million people in 2020 with its diabetes care products is intended to enhance access to quality care.

This commitment is pursued through a focus on product innovation and a promise to always provide affordable insulin. The graph on the right shows the expanded reach of Novo Nordisk's products: an estimated 26.8 million patients with diabetes worldwide, compared with 24.4 million in 2014. This growth reflects increased sales of human insulin in low- and middle-income countries and modern and new-generation insulins globally.

### Differential pricing policy

Novo Nordisk sold human insulin according to the company's differential pricing policy in 23 of the world's 48 poorest countries, compared with 32 countries in 2014. The decline is attributed to fewer insulin tenders in 2015, and lack of response to the offer.

### PATIENTS REACHED WITH DIABETES CARE PRODUCTS



23

LDC COUNTRIES, DOWN FROM 32 IN 2014

## SECTION 1 BASIS OF PREPARATION

### General reporting standards and principles

The Consolidated social statement has been prepared in accordance with the Danish Financial Statements Act (FSA), sections 99a and 99b. Section 99a requires Novo Nordisk to account for the company's activities relating to social responsibility, reporting on business strategies, and activities in the areas of human rights, labour standards, environment, anti-corruption and climate. Section 99b requires Novo Nordisk to account for the gender diversity at Board level by reporting on targets and policies ensuring increased gender diversity over time. Companies that subscribe to the UN Global Compact and annually submit their Communication on Progress will be in compliance with the FSA, provided that the annual report includes a reference to where the information has been made publicly available. Read Novo Nordisk's Communication on Progress 2015 at [novonordisk.com/annualreport](http://novonordisk.com/annualreport) and on the UN Global Compact's website at [unglobalcompact.org/COP](http://unglobalcompact.org/COP).

Novo Nordisk adheres to the following internationally recognised voluntary reporting standards and principles (for overview, read more on p 113):

- UN Global Compact. As a signatory to the UN Global Compact, a strategic policy initiative for businesses that are committed to aligning their operations and strategies with 10 universally accepted principles in the areas of human rights, labour, environment and anti-corruption, Novo Nordisk reports on progress during 2015 in its Communication on Progress, which can be found at [novonordisk.com/annualreport](http://novonordisk.com/annualreport). As a member of UN Global Compact LEAD, a platform for a select group of companies to drive leadership to the next generation of sustainability performance, Novo Nordisk demonstrates its sustainability governance and management processes through the Blueprint for Corporate Sustainability Leadership, which is also part of the Communication on Progress.

- AA1000 framework for accountability. The framework (AA1000APS(2008) and AA1000AS(2008)) states that reporting must provide a complete, accurate, relevant and balanced picture of the organisation's approach to and impact on society.

To Novo Nordisk, AA1000APS(2008) is a component in creating a generally applicable approach to assessing and strengthening the credibility of the Group's public reporting of social and environmental information. Novo Nordisk's assurance process has been designed to ensure that the qualitative and quantitative information that documents the social and environmental dimensions of performance as well as the systems that underpin the data and performance are assured. The principles outlined in AA1000APS(2008) have been applied as described below.

#### Inclusivity

As a pharmaceutical business with global reach, Novo Nordisk is committed to being accountable to those stakeholders who are impacted by the organisation. Novo Nordisk maps its stakeholders and has processes in place to ensure inclusion of stakeholder concerns and expectations. In addition, Novo Nordisk continuously develops its stakeholder engagement and sustainability capacity at corporate and affiliate levels.

#### Materiality

Key issues are identified through ongoing stakeholder engagement and trendspotting, and are addressed by programmes or action plans with clear and measurable targets. Long-term targets are set to guide performance in strategic areas. The issues presented in the annual report are deemed to have a significant impact on the Group's future business performance and may support stakeholders in their decision-making.



**Responsiveness**

The report reaches out to a wide range of stakeholders, each with their specific needs and interests. To most stakeholders, however, the annual report is just one element of interaction and communication with the company. The annual report reflects how the company is managing operations in ways that respond to and consider stakeholder concerns and interests.

In addition, Novo Nordisk uses the content elements and guiding principles of the International Integrated Reporting Framework, <IR>, developed by the International Integrated Reporting Council to guide the reporting.

**Applying materiality**

It is Novo Nordisk's responsibility to ensure that Management priorities and those areas in which the Group has significant impact are addressed. Issues with respect to social and environmental reporting are prioritised, and the issues considered most material are included in the annual report.

In assessing which information to include in the annual report, legal requirements and disclosure commitments made by Novo Nordisk are considered. Furthermore, it is assessed whether information is tied directly or indirectly to Novo Nordisk's ability to create value. Short- and long-term value creation is taken into consideration.

The outcomes of formal reviews, research, stakeholder engagement and internal materiality discussions are presented as a proposal for annual reporting content to Executive Management and the Board of Directors.

The conclusion from the external assurance provider is available in the Independent assurance report on p 111.

**Principles of consolidation**

The Consolidated social statement and disclosures cover the Novo Nordisk Group comprising Novo Nordisk A/S and entities controlled by Novo Nordisk A/S.

**SOCIAL ACCOUNTING POLICIES**

The accounting policies set out below and in the notes have been applied consistently in the preparation of the Consolidated social statement for all the years presented with the following exceptions.

**Changes to accounting policies and disclosures**

The following disclosure changes have been made to align with Management priorities:

- 'Diverse senior management teams' is replaced by 'Gender in Management (men/women)' to reflect the updated policy focus on all managerial levels. External reporting on diversity in terms of nationality has been discontinued as it is not legal in the US to record employees' nationality. Ensuring a diverse workforce remains a focus area for Novo Nordisk.
- 'Warning Letters and re-inspections' is replaced by 'Failed inspections' for consistency with conformance indicators.
- 'Company reputation' is reported using a new methodology covering more stakeholders.

**OTHER ACCOUNTING POLICIES****Working the Novo Nordisk Way**

Working the Novo Nordisk Way is an employee assessment measured on a scale of 1–5, with 5 being the best, and is a simple average of respondents' answers to all mandatory questions in the annual employee survey, eVoice, covering the Novo Nordisk Way. For 2015, the eVoice response rate was 91%, compared with 94% in 2014.

**Relevant employees trained in business ethics**

The mandatory business ethics training is based on globally applicable e-learning, standard operating procedures (SOPs) and related tests released annually by the Novo Nordisk Business Ethics Compliance Office. The target groups for the individual SOPs vary in size and are defined by Novo Nordisk in each SOP. The target groups are all employees in Novo Nordisk at the end of the reporting period except employees on leave, student assistants, PhDs and post docs. The percentage of employees completing the training is calculated as the percentage of completion of both the SOPs and the related tests, based on internal registrations.

**Business ethics reviews**

The number of business ethics reviews is recorded as the number of conducted business ethics reviews performed by Group Internal Audit in affiliates, production sites and headquarter areas. Furthermore, the number includes other business ethics assurance activities such as trend reports and third-party reviews.

## SECTION 2 PATIENTS

### 2.1 PATIENTS REACHED WITH NOVO NORDISK DIABETES CARE PRODUCTS (ESTIMATE)

**Accounting policies**

The number of full-year patients reached with Novo Nordisk diabetes care products, except devices and PrandiMet®, is estimated by dividing Novo Nordisk's annual sales volume by the annual usage dose per patient for each product class as defined by the WHO. PrandiMet® is not included as no WHO-defined dosage exists.

The WHO-defined daily dosage has not changed since 1982 and it may not reflect the recommended or prescribed daily dose precisely. Actual doses are based on individual characteristics (eg age and weight) and pharmacokinetic considerations. Despite this uncertainty, it is Novo Nordisk's assessment that this is the most consistent way of reporting.

**Development**

The estimated number of full-year patients reached with Novo Nordisk's diabetes care products increased from 24.4 million in 2014 to 26.8 million in 2015. The development reflects an overall increase in the number of people treated with Novo Nordisk's insulin products and was mainly driven by human insulin (1.2 million people) and modern and new-generation insulins (0.9 million people).

### 2.2 LEAST DEVELOPED COUNTRIES WHERE NOVO NORDISK SELLS INSULIN ACCORDING TO THE DIFFERENTIAL PRICING POLICY

**Accounting policies**

Novo Nordisk has formulated a differential pricing policy for the least developed countries (LDCs) as defined by the UN. The differential pricing policy is part of Novo Nordisk's global initiative to promote access to healthcare for all LDCs. The purpose of the policy is to offer human insulin in vials to all LDCs at or below a market price of 20% of the average prices for human insulin in vials in the western world. The western world is defined as Europe (the EU, Switzerland and Norway), the US, Canada and Japan. The number of LDCs where Novo Nordisk sells human insulin in vials according to the differential pricing policy is measured by direct or indirect sales by Novo Nordisk via government tender or private market sales to wholesalers, distributors or non-governmental organisations.



## 2.2 LEAST DEVELOPED COUNTRIES WHERE NOVO NORDISK SELLS INSULIN ACCORDING TO THE DIFFERENTIAL PRICING POLICY (CONTINUED)

NUMBER OF LDCs	2015	2014	2013
Total LDCs	48	48	49
LDCs not buying according to pricing policy	3	2	3
LDCs with no sales	22	14	11
Total LDCs buying insulin according to pricing policy	23	32	35

Novo Nordisk sold human insulin according to the company's differential pricing policy in 23 of the world's 48 poorest countries, compared with 32 countries in 2014. The decline is attributed to fewer insulin tenders in 2015, and lack of response to the offer from governments or private wholesalers and other partners to Novo Nordisk's offer. The total number of patients treated with insulin sold at or below the differential pricing policy price was approximately 411,000 in 2015, which is a slight decrease compared with approximately 431,000 in 2014.

In 2015, an estimated 5.5 million patients were treated with insulin for less than USD 0.19 per day, compared with 4.3 million patients in 2014.

Novo Nordisk operated in Haiti, Kiribati and Myanmar, but did not sell insulin at the differential price here. The governments in those countries were offered the opportunity to buy insulin at the differential price, but the insulin sold there in 2015 was sold to the private market.

Novo Nordisk is unable to guarantee that the price at which the company sells the insulin will be reflected in the final price to the consumer. Printing the price on the actual product has been one initiative tried to avoid mark-ups on price. While Novo Nordisk prefers to sell insulin at the differential price through government tenders, the company is willing to sell to private distributors and agents.

## 2.3 DONATIONS

### Accounting policies

Donations by Novo Nordisk to the World Diabetes Foundation and the Novo Nordisk Haemophilia Foundation are recognised as an expense when the donation is paid out or when an unconditional commitment to donate has been made. For additional information regarding the World Diabetes Foundation, please refer to note 5.3 in the Consolidated financial statements.

DONATIONS IN DKK MILLION	2015	2014	2013
World Diabetes Foundation	78	66	64
Novo Nordisk Haemophilia Foundation	19	18	19
Total donations	97	84	83

## 2.4 ANIMALS PURCHASED FOR RESEARCH

### Accounting policies

Animals purchased for research is recorded as the number of animals purchased for all research undertaken by Novo Nordisk either in-house or by external contractors. The number of animals purchased is based on internal registration of purchased animals and yearly reports from external contractors.

ANIMALS PURCHASED	2015	2014	2013
Mice, rats and other rodents	65,335	62,423	69,883
Pigs	939	818	1,177
Rabbits	443	574	1,124
Dogs	214	374	238
Non-human primates	302	344	240
Other vertebrates	7	0	0
Total	67,240	64,533	72,662

The number of animals purchased for research in 2015 increased by 4% compared with 2014 due to an increase in early-phase research. In all, 97% of the animals purchased were rodents, and the variation in the purchase of large animals from year to year reflects the different development phases the research projects have reached.

## 2.5 NEW PATENT FAMILIES (FIRST FILINGS)

### Accounting policies

New patent families (first filings) is recorded as the number of new patent applications that were filed during the year.

#### Development

A total of 77 new patent families were established in 2015, a decrease of 17% compared with filing activity in 2014, when 93 patent families were established. The decrease was due to lower patent-filing activity in Global Research.

The patent expiry dates for the product portfolio are shown in the table on the next page. The dates provided are for expiry in the US, Germany, China and Japan of patents on the active ingredient, unless otherwise indicated, and include extensions of patent term (including for paediatric extension, where applicable). For several products, in addition to the compound patent, Novo Nordisk holds other patents on manufacturing processes, formulations or uses that may be relevant for exclusivity beyond the expiration of the active ingredient patent. Furthermore, regulatory data protection may apply.



## 2.5 NEW PATENT FAMILIES (FIRST FILINGS) (CONTINUED)

### MARKETED PRODUCTS IN KEY MARKETS (ACTIVE INGREDIENTS)

	US	Germany	China	Japan
<i>Diabetes care:</i>				
NovoRapid® (NovoLog®)	Expired <sup>1</sup>	Expired <sup>1</sup>	Expired <sup>1</sup>	Expired <sup>1</sup>
NovoMix® 30 (NovoLog® Mix 70/30)	Expired <sup>1</sup>	Expired	Expired	Expired
Levemir®	2019	2019	Expired	2019
NovoNorm® (Prandin®)	Expired	Expired	Expired	2016
Victoza®	2022	2022	2017	2022
Tresiba®	2029 <sup>2</sup>	2028	2024	2027
Ryzodeg®	2029 <sup>2</sup>	2028	2024	2027
Xultophy®	2029 <sup>2</sup>	2028	2024	2027
<i>Obesity:</i>				
Saxenda®	2022	2022	2017	2017
<i>Biopharmaceuticals:</i>				
Norditropin® (Norditropin® SimpleXx®)	2017 <sup>3</sup>	2017 <sup>3</sup>	2017 <sup>3</sup>	2017 <sup>3</sup>
NovoSeven®	Expired <sup>4</sup>	Expired <sup>4</sup>	Expired <sup>4</sup>	Expired <sup>4</sup>
NovoEight®	N/A <sup>5</sup>	N/A <sup>5</sup>	N/A <sup>5</sup>	N/A <sup>5</sup>
NovoThirteen® (TRETEN®)	2021 <sup>6</sup>	Expired <sup>7</sup>	N/A <sup>7</sup>	Expired <sup>7</sup>
Vagifem® 10 mcg	2022 <sup>8,9</sup>	2021 <sup>8</sup>	N/A	2021 <sup>8</sup>

1. Formulation patent until 2017.

2. Current estimate.

3. Formulation patent providing exclusivity to the composition of excipients used in the drug products.

4. Room temperature-stable formulation patent until 2023.

5. Process patents until 2028 in China, Germany and Japan and until 2030 in the US.

6. Data protection runs until 2025.

7. Formulation patent expiring in 2016.

8. Patent covers low-dose treatment regimen.

9. Licensed to three generic manufacturers beginning in October 2016.

## SECTION 3 EMPLOYEES

### 3.1 EMPLOYEES

#### Accounting policies

The number of employees is recorded as all employees except externals, employees on unpaid leave, interns, bachelor and master thesis employees, and substitutes at year-end.

The rate of turnover is measured as the number of employees, excluding temporary employees, who left the Group during the financial year compared with the average number of employees, excluding temporary employees.

Diversity in Novo Nordisk is reported as the percentage split by gender in all managerial positions and for newly appointed managers. Managerial positions are defined as all managers in Novo Nordisk (global job level incl CEO, EVP, SVP, CVP, VP, Director, Manager and Team Leader). New managers are defined as all employees who have moved to a managerial position within the last 12 months – both promoted and externally hired.

EMPLOYEES	2015	2014	2013
North America	6,439	6,465	6,162
Europe	21,871	22,136	20,286
– of which in Denmark	17,398	17,664	16,027
International Operations	7,304	6,666	6,054
Japan & Korea	1,119	1,086	1,084
Region China	4,389	5,097	4,850
<b>Total employees</b>	<b>41,122</b>	<b>41,450</b>	<b>38,436</b>
Employees (FTEs)	40,638	40,957	37,978
<b>Employee turnover</b>	<b>9.2%</b>	<b>9.0%</b>	<b>8.1%</b>
Increase in employees	(1%)	8%	11%
Gender in Management (men/women)	59%/41%	60%/40%	61%/39%
Share of women among newly appointed managers	44%	42%	41%

The slight decrease in the total headcount is due to the divestment of NNIT A/S in 2015. The underlying growth (5%) is in line with expectations and is primarily driven by expansion within the sales region International Operations and in the research & development and production organisations, primarily in Denmark. Employee turnover increased slightly, primarily driven by Region China.

Among employees as a whole, the gender split was 50/50 in 2015, which is the same as in 2014.

### 3.2 FREQUENCY OF OCCUPATIONAL ACCIDENTS

#### Accounting policies

The frequency of occupational accidents with absence is measured as the internally reported number of accidents for all employees (FTEs), excluding externals, employees on unpaid leave, interns, bachelor and master thesis employees, and substitutes, per million nominal working hours. An occupational accident with absence is any work-related accident causing at least one day of absence in addition to the day of the accident.

#### Development

In 2015, a sales representative in India died in a traffic accident while on duty. Prior to this tragic accident, Novo Nordisk had not had any fatal occupational accidents since 2011. The number of occupational accidents with absence decreased by 7% compared with 2014. The frequency of occupational accidents decreased from 3.2 per million working hours in 2014 to 3.0 per million working hours in 2015. Novo Nordisk is working with a zero-injury mindset and the long-term commitment is to continuously improve performance. Focus is on strengthening risk awareness and preventing occupational accidents for all employees.



## SECTION 4 ASSURANCE

### 4.1 FULFILMENT OF ACTION POINTS FROM FACILITATIONS OF THE NOVO NORDISK WAY

#### Accounting policies

Facilitation is the internal audit process for assessing compliance with the Novo Nordisk Way. The assessment is based on review of documentation followed by an on-site visit where randomly selected employees and Management are interviewed. Any gaps between the Novo Nordisk Way and performance of the processes are identified and presented to Management as findings. The facilitator and Management agree on an action plan to close the findings. The percentage of fulfilment of action points arising from facilitations of the Novo Nordisk Way is measured as an average of timely closure of action points issued in the current year and the two previous years. The reason for using a three-year average as the basis for the calculation is that action lead times typically vary from a couple of months to more than a year.

FACILITATIONS AND FINDINGS	2015			2014			2013		
	94%			95%			96%		
Fulfilment of action points from facilitations of the Novo Nordisk Way									
Facilitations	65			69			75		
Findings	257			213			178		

A total of 65 units were facilitated covering approximately 18,500 employees, 15% of whom were interviewed. Overall, the facilitations in 2015 show a 'high level' of compliance with the Novo Nordisk Way. Corrective actions and corresponding deadlines have been agreed with local management for all findings. The main areas of improvement identified, covering 60% of the findings, concerned Essential 2 ('We set ambitious goals and strive for excellence'), Essential 7 ('We focus on personal performance and development') and Essential 9 ('We optimise the way we work and strive for simplicity'). The Essentials, of which there are 10, are the basis for implementation of the Novo Nordisk Way.

### 4.2 SUPPLIER AUDITS

#### Accounting policies

The number of supplier audits concluded by Novo Nordisk's Supplier Audit department includes the number of responsible sourcing audits and quality audits conducted in the areas of direct and indirect spend on materials.

BY TYPE OF AUDIT	2015	2014	2013
Responsible sourcing audits	28	25	25
Quality audits	212	199	196
<b>Total supplier audits</b>	<b>240</b>	<b>224</b>	<b>221</b>

The level of audits concluded in 2015 increased by 7% compared with 2014, which was mainly due to Management's decision to build new factories. One critical finding was issued in connection with a quality audit in 2015. A continuous improvement and engagement programme has been initiated with the supplier in order to address the issue.

### 4.3 PRODUCT RECALLS

#### Accounting policies

The number of product recalls is recorded as the number of times Novo Nordisk has instituted a recall and includes recalls in connection with clinical trials. A recall can affect various countries but only counts as one recall.

#### Development

In 2015, Novo Nordisk had two instances of product recalls, which is at the same level as in 2014. Both recalls were related to incorrect labelling of products. Local health authorities were informed in both instances to ensure that distributors, pharmacies, doctors and patients received appropriate information.

### 4.4 FAILED INSPECTIONS

#### Accounting policies

The number of failed inspections is measured in relation to the US Food & Drug Administration, European Medicines Agency (EMA), the Japanese Pharmaceuticals & Medical Devices Agency (PMDA), Lloyd's Register Quality Assurance (LRQA) and domestic authorities for strategic manufacturing sites. Failed inspections are defined as inspections where Warning Letters or EMA non-compliance letters related to GMP inspections are received, GMP/ISO certificates for strategic sites are lost, pre-approval inspections result in a Warning Letter, study conclusions are changed due to GCP/GLP inspection issues, or marketing or import authorisations are withdrawn due to inspection issues. Strategic sites are defined as the manufacturing sites in Brazil, China, Denmark, France and the US.

#### Development

In 2015, as in 2014, there were no failed inspections among those resolved at year-end. A total of 82 inspections were conducted, and at year-end 57 were passed and 25 were unresolved as final inspection reports had not been received at year-end or the final authority acceptance was pending, which is normal.

### 4.5 COMPANY REPUTATION

#### Accounting policies

Company reputation is measured annually using the RepTrak® methodology developed by Reputation Institute. The total score is measured as the mean company reputation score among people with diabetes, general practitioners, diabetes specialists and employees across 15 key markets. Reputation is measured on a scale of 0–100, with 100 being the best possible score. A score above 80 is considered excellent.

The data for external stakeholders are collected through annual surveys carried out by external consultancy firms. The employee data are collected from the yearly employee survey. For a few of the markets, historical data are not available for all the external stakeholder groups included. This has been assessed as having no material impact on the numbers reported and development trends.

COMPANY REPUTATION BY STAKEHOLDER GROUP	2015			2014			2013		
	73.9			71.9			N/A		
People with diabetes									
Employees	83.8			84.0			N/A		
General practitioners	85.4			82.2			81.9		
Diabetes specialists	86.4			85.1			83.9		
<b>Total score</b>	<b>82.4</b>			<b>80.8</b>			<b>82.9</b>		



# STATEMENT OF ENVIRONMENTAL PERFORMANCE

FOR THE YEAR ENDED 31 DECEMBER

	Note	2015	2014	2013
<b>RESOURCES</b>				
Energy consumption (1,000 GJ)	2.1	2,778	2,556	2,572
Water consumption (1,000 m <sup>3</sup> )	2.2	3,131	2,959	2,685
<b>EMISSIONS, ORGANIC RESIDUES AND WASTE</b>				
CO <sub>2</sub> emissions from energy consumption (1,000 tons)	3.1	107	120	125
CO <sub>2</sub> emissions from transport (1,000 tons)	3.1	43	57	59
Organic residues (tons)	3.2	124,049	110,095	110,228
Waste (tons)	3.3	34,715	30,720	20,387
Non-hazardous waste (ratio)	3.3	42%	50%	63%
Breaches of regulatory limit values	3.4	28	9	14

## NOTES RESOURCES, EMISSIONS, ORGANIC RESIDUES AND WASTE

Basis of preparation

Resources

Emissions, organic residues and waste

In the Consolidated environmental statement, Novo Nordisk reports on performance in terms of inputs of resources and outputs with figures for emissions, organic residues and waste. Progress is reported against the long-term targets to continuously reduce environmental impacts.

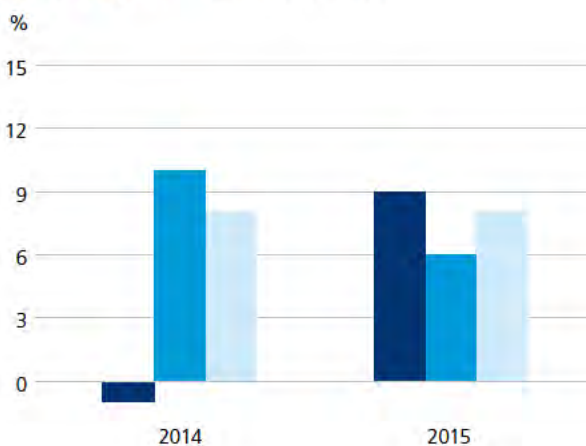
To support the two long-term targets, the environmental statement contains additional performance information of strategic importance such as organic residue, waste and breaches of regulatory limit values.

### Challenges in meeting targets on water and energy

Energy consumption increased by 9% and water consumption by 6% compared with last year, while sales, measured in local currencies, increased by 8%. This development in performance is primarily due to increased production to meet market demands and furthermore, a new insulin-filling plant in Russia became fully operational in 2015.

### DEVELOPMENT IN ENERGY AND WATER CONSUMPTION VERSUS SALES

■ Energy ■ Water ■ Sales in local currencies



### Significant reduction in CO<sub>2</sub> emissions

In 2015 Novo Nordisk significantly reduced CO<sub>2</sub> emissions from production and product distribution by a total of 27,000 tons despite the increase in sales. CO<sub>2</sub> emissions from energy consumption decreased by 11% due to an increased share of renewable energy, which is a strategic priority for Novo Nordisk. At the production site in Tianjin, China, Novo Nordisk started sourcing 'Gold Power' renewable energy certificates, and in Denmark 31% of the natural gas was replaced by bio-natural gas, which is biogas upgraded to the quality of natural gas and distributed via the natural gas system. It is the ambition that all production sites are run on renewable power by 2020.

**↓ 27,000**  
TONS REDUCTION OF CO<sub>2</sub> EMISSIONS



## SECTION 1 BASIS OF PREPARATION

### General reporting standards and principles

The Consolidated environmental statement has been prepared in accordance with the same standards as those for the Consolidated social statement. Read more in section 1 'Basis of preparation' of the Consolidated social statement on p 97.

### Principles of consolidation

The Consolidated environmental statement covers the production sites including office buildings, except for CO<sub>2</sub> emissions from transport, which includes external forwarders used to distribute Novo Nordisk products.

### ENVIRONMENTAL ACCOUNTING POLICIES

The accounting policies set out below have been consistently applied in preparation of the Consolidated environmental statement for all the years presented.

### Changes to accounting policies and disclosures

The following disclosure change has been made to align with Management priorities:

- 'CO<sub>2</sub> emissions from refrigerants' has been omitted as it is not used as Management information.

## SECTION 2 RESOURCES

### 2.1 ENERGY CONSUMPTION

#### Accounting policies

Energy consumption is measured as both direct supply of energy (internally produced energy), which is energy Novo Nordisk produces from mainly natural gas and wood, and indirect supply of external energy (externally produced energy), which is electricity, steam and district heat. The consumption of fuel (internally produced energy) and externally produced energy is based on meter readings and invoices.

#### ENERGY CONSUMPTION IN 1,000 GJ

	2015	2014	2013
Diabetes and obesity care	2,006	1,816	1,762
Biopharmaceuticals	322	316	362
Not allocated <sup>1</sup>	450	424	448
<b>Total energy consumption</b>	<b>2,778</b>	<b>2,556</b>	<b>2,572</b>

1. Not allocated consists of consumption that cannot be directly linked to the production of either Diabetes and obesity care or Biopharmaceuticals, ie office buildings and research activities.

In 2015, energy consumption increased by 9% compared with 2014 due to increased production volume and increased production capacity, as the site in Russia is now fully operational and hence included in the corporate reporting for the first time.

### 2.2 WATER CONSUMPTION

#### Accounting policies

Water consumption is measured based on meter readings and invoices. It includes drinking water, industrial water and steam.

#### WATER CONSUMPTION IN 1,000 M<sup>3</sup>

	2015	2014	2013
Diabetes and obesity care	2,753	2,568	2,261
Biopharmaceuticals	213	209	244
Not allocated <sup>1</sup>	165	182	180
<b>Total water consumption</b>	<b>3,131</b>	<b>2,959</b>	<b>2,685</b>

1. Not allocated consists of consumption that cannot be directly linked to the production of either Diabetes and obesity care or Biopharmaceuticals, ie office buildings and research activities.

In 2015, water consumption increased by 6% compared with 2014 due to increased production in all business areas to meet market demands. Optimisations of water purification at the filling plant in Clayton, US, reduced water consumption at this site by 27%. 75% of the water is used in Denmark. In 2015, 14% of the water was used at locations classified as water-scarce compared with last year when 70% of the water used was at locations classified as water-scarce. Since then, Kalundborg in Denmark has been reclassified and is no longer considered a water-scarce area.

## SECTION 3 EMISSIONS, ORGANIC RESIDUES AND WASTE

### 3.1 CO<sub>2</sub> EMISSIONS

#### Accounting policies

##### CO<sub>2</sub> emissions from energy consumption

The amount of CO<sub>2</sub> emissions from energy consumption covers consumption related to production measured in metric tons. CO<sub>2</sub> emissions from energy consumption is calculated according to the Greenhouse Gas (GHG) Protocol and based on emission factors from the previous year.

##### CO<sub>2</sub> emissions from transport (product distribution)

CO<sub>2</sub> emissions from product distribution is calculated by external transportation suppliers as the estimated emissions from product distribution in metric tons. It is calculated as the worldwide distribution of semi-finished and finished products, raw materials and components by air, sea and road between production sites and from production sites to affiliates, direct customers and importing distributors. CO<sub>2</sub> emissions from product distribution from affiliates to pharmacies, hospitals and wholesalers are not included.



### 3.1 CO<sub>2</sub> EMISSIONS (CONTINUED)

CO <sub>2</sub> EMISSIONS IN 1,000 TONS	2015	2014	2013
- Diabetes and obesity care	88	94	96
- Biopharmaceuticals	6	10	11
- Not allocated <sup>1</sup>	13	16	18
CO <sub>2</sub> emissions from energy consumption	107	120	125
CO <sub>2</sub> emissions from transport	43	57	59
<b>Total CO<sub>2</sub> emissions</b>	<b>150</b>	<b>177</b>	<b>184</b>

1. Not allocated consists of consumption that cannot be directly linked to the production of either Diabetes and obesity care or Biopharmaceuticals, ie office buildings and research activities.

CO<sub>2</sub> emissions from energy consumption decreased by 11% in 2015 despite increased energy consumption. The decrease is a result of the continued priority of increasing the share of renewable energy. In 2015, the filling plant in Tianjin, China, started to source renewable energy certificates from a windfarm, and about one-third of the natural gas in Denmark was replaced by bio-natural gas. This is biogas upgraded to the quality of natural gas.

CO<sub>2</sub> emissions from transport (product distribution) decreased significantly, by 25%, compared with 2014. This is mainly due to an increase in the volume of products being distributed via sea from 72% in 2014 to 83% in 2015. In 2015, CO<sub>2</sub> emissions from sea freight accounted for 16%, transport via trucks 5% and air transport 79% of total emissions. Distributing as many products as possible by sea is a priority for Novo Nordisk, as it reduces both CO<sub>2</sub> emissions and costs.

### 3.2 ORGANIC RESIDUES

#### Accounting policies

Organic residues consist of recycled biomass and ethanol from the production of the active ingredients. The biomass is measured in m<sup>3</sup> and converted to tons. The amount of ethanol is calculated based on volume and concentration and then converted to tons. The residues are primarily used in biogas plants where energy is recovered. The biomass is used as fertilizers on local farmland after the biogas production.

ORGANIC RESIDUES (TONS)	2015	2014	2013
Biomass	113,453	101,729	104,324
Ethanol	10,596	8,366	5,904
<b>Total organic residues</b>	<b>124,049</b>	<b>110,095</b>	<b>110,228</b>

Biomass increased by 12% and recycled ethanol by 27% in 2015 compared with 2014 due to increased production activities in the Diabetes and obesity care business. The relatively high increase in recyclable ethanol is due to less internal re-use following start-up of new production lines and challenges with impurities.

### 3.3 WASTE

#### Accounting policies

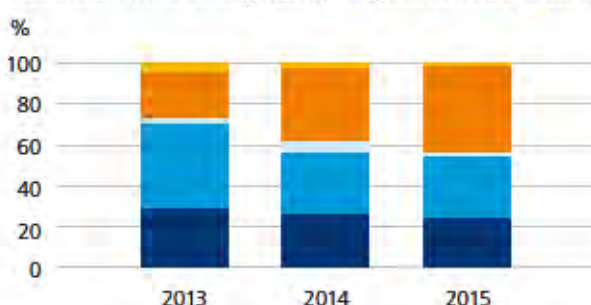
Waste is measured as the sum of non-hazardous and hazardous waste disposed of based on weight receipts.

Non-hazardous waste (ratio) is calculated as a percentage of the total amount of waste disposed of.

TONS OF WASTE	2015	2014	2013
Non-hazardous waste	14,500	15,492	12,813
Hazardous waste	20,215	15,228	7,574
<b>Total waste</b>	<b>34,715</b>	<b>30,720</b>	<b>20,387</b>
Non-hazardous waste (ratio)	42%	50%	63%

#### WASTE

■ Recycling ■ Incineration with energy recovery  
■ Incineration without energy recovery ■ Special treatment ■ Landfilling



Waste increased by 13% from 2014 to 2015, primarily due to increased production of diabetes and obesity care products, which led to a 33% increase in the amount of hazardous waste of which the majority was non-recyclable ethanol. This ethanol is disposed of in special incineration plants with energy recovery. Non-hazardous waste decreased by 6% which was mainly due to re-classification of urea from waste to fertilizer.

### 3.4 BREACHES OF REGULATORY LIMIT VALUES

#### Accounting policies

Breaches of regulatory limit values covers all breaches reported to the environmental authorities.

#### Development

Breaches of regulatory limit values increased from 9 in 2014 to 28 in 2015. All breaches have been reported to the authorities. 24 breaches are related to wastewater with only minor impact on the environment. The large increase is due to a change of cleaning agent at one filling plant. This change was a requirement from the local authorities and corrective actions are being taken.



# FINANCIAL STATEMENTS OF THE PARENT COMPANY 2015

The following pages comprise the financial statements of the parent company, being the legal entity Novo Nordisk A/S. Apart from ownership of the subsidiaries in the Novo Nordisk Group, the activity within the parent

company mainly comprises sales, research and development, production, corporate activities and support functions.

## INCOME STATEMENT

FOR THE YEAR ENDED 31 DECEMBER

DKK million	Note	2015	2014
Sales	2	65,911	55,739
Cost of goods sold	3	11,974	12,260
Gross profit		53,937	43,479
Sales and distribution costs	3	14,528	10,715
Research and development costs	3	11,265	11,737
Administrative costs	3	1,686	1,627
Other operating income, net		3,644	932
Non-recurring income from the partial divestment of NNIT A/S	10	1,732	—
Operating profit		30,102	20,332
Profit in subsidiaries, net of tax	11	14,800	10,963
Financial income	4	554	160
Financial expenses	4	6,099	788
Profit before income taxes		39,357	30,667
Income taxes	5	4,734	4,254
Net profit for the year		34,623	26,413
Proposed appropriation of net profit:			
Dividends		16,230	12,905
Net revaluation reserve according to the equity method		(3,050)	(1,856)
Retained earnings		21,443	15,364
		34,623	26,413

## BALANCE SHEET

AT 31 DECEMBER

DKK million	Note	2015	2014
<b>ASSETS</b>			
Intangible assets	7	1,918	1,124
Property, plant and equipment	8	17,797	15,686
Financial assets	10, 11	16,057	18,939
Total non-current assets		35,772	35,749
Raw materials		1,541	1,327
Work in progress		6,503	5,828
Finished goods		1,524	1,254
Inventories		9,568	8,409
Trade receivables		1,729	1,950
Amounts owed by affiliated companies		10,752	10,272
Tax receivables		3,708	3,053
Other receivables		624	780
Receivables		16,813	16,055
Deferred income tax assets	6	1,668	1,484
Marketable securities		3,539	1,505
Derivative financial instruments		304	30
Cash at bank and on hand		15,493	13,268
Total current assets		47,385	40,751
Total assets		83,157	76,500

## EQUITY AND LIABILITIES

Share capital		520	530
Net revaluation reserve according to the equity method		4,977	8,696
Retained earnings		40,861	31,068
Total equity	9	46,358	40,294
Deferred income tax liabilities	6	15	—
Other provisions	12	717	565
Total provisions		732	565
Current debt		778	462
Derivative financial instruments		1,382	2,607
Trade payables		2,288	2,231
Amounts owed to affiliated companies		26,380	25,404
Tax payable		188	186
Other liabilities	12	5,051	4,751
Current liabilities		36,067	35,641
Total liabilities		36,067	35,641
Total equity and liabilities		83,157	76,500



# NOTES

## 1 ACCOUNTING POLICIES

The financial statements of the parent company have been prepared in accordance with the Danish Financial Statements Act (Class D) and other accounting regulations for companies listed on NASDAQ Copenhagen.

The accounting policies for the financial statements of the parent company are unchanged from the last financial year, with the exception of the accounting policy regarding associated companies. The accounting policies are the same as for the Consolidated financial statements with the adjustments described below. For a description of the accounting policies of the Group, please refer to the Consolidated financial statements, pp 61–62.

No separate statement of cash flows has been prepared for the parent company; please refer to the Statement of cash flows for the Group on p 58.

### SUPPLEMENTARY ACCOUNTING POLICIES FOR THE PARENT COMPANY

#### Financial assets

In the financial statements of the parent company, investments in subsidiaries are recorded under the equity method, using the respective share of the net asset values in subsidiaries. Net profit of subsidiaries less unrealised intra-Group profits is recorded in the Income statement of the parent company.

To the extent net profit exceeds declared dividends from such companies, net revaluation of investments in subsidiaries is transferred to Net revaluation reserve under Equity according to the equity method. Profits in subsidiaries are disclosed as profit after tax.

Fair value adjustments of financial assets categorised as 'Available for sale' are recognised in the Income statement.

For the accounting policy regarding investments in associated companies please refer to note 10.

#### Tax

For Danish tax purposes, the parent company is assessed jointly with its Danish subsidiaries. The Danish jointly taxed companies are included in a Danish on-account tax payment scheme for Danish corporate income tax. All current taxes under the scheme are recorded in the individual companies. Novo Nordisk A/S and its Danish subsidiaries are included in the joint taxation of the parent company, Novo A/S.

## 2 SALES

DKK million	2015	2014
<b>Sales by business segment</b>		
Diabetes and obesity care	65,665	55,476
Biopharmaceuticals	246	263
<b>Total sales</b>	<b>65,911</b>	55,739
<b>Sales by geographical segment</b>		
North America	33,491	23,961
Europe	13,861	13,764
International Operations	9,825	8,985
Japan & Korea	2,418	2,472
Region China	6,316	6,557
<b>Total sales</b>	<b>65,911</b>	55,739

Sales are attributed to geographical segment based on location of the customer. For definitions of segments, please refer to note 2.2 to the Consolidated financial statements.

## 3 EMPLOYEE COSTS

DKK million	2015	2014
Wages and salaries	10,012	9,080
Share-based payment costs	246	172
Pensions	902	829
Other social security contributions	216	219
Other employee costs	335	313
<b>Total employee costs</b>	<b>11,711</b>	10,613
Change in employee costs included in inventories	145	157

For information regarding remuneration to the Board of Directors and Executive Management, please refer to 'Remuneration' on pp 49–51 and note 2.4 to the Consolidated financial statements.

	2015	2014
Average number of full-time employees in Novo Nordisk A/S	15,437	14,821

## 4 FINANCIAL INCOME AND FINANCIAL EXPENSES

DKK million	2015	2014
Interest income relating to subsidiaries	88	64
Income from associated company	47	–
Other financial income	419	96
<b>Total financial income</b>	<b>554</b>	160
Interest expenses relating to subsidiaries	16	18
Foreign exchange loss (net)	648	540
Other financial expenses	5,435	230
<b>Total financial expenses</b>	<b>6,099</b>	788

## 5 INCOME TAXES

Uncertain tax positions are presented individually as part of Tax receivables/ Tax payables.

Novo Nordisk A/S and its Danish subsidiaries' tax contribution to the joint taxation in 2015 amounts to DKK 4,958 million (DKK 5,082 million in 2014). In 2015, Novo Nordisk A/S paid income taxes of DKK 5,883 million related to the current year (DKK 5,520 million in 2014) and received DKK 437 million in taxes regarding prior years (DKK 603 million in 2014). Furthermore, income taxes of DKK 23 million have been paid in income taxes by Danish subsidiaries (DKK 19 million in 2014).

## 6 DEFERRED INCOME TAX ASSETS/(LIABILITIES)

DKK million	2015	2014
The deferred tax assets/liabilities are allocated to the various balance sheet items as follows:		
Property, plant and equipment	(646)	(690)
Indirect production costs	(1,057)	(1,007)
Unrealised internal profit	3,197	2,760
Other	159	421
<b>Total income tax assets/(liabilities)</b>	<b>1,653</b>	1,484

The Danish corporate tax rate was 23.5% in 2015 (24.5% in 2014). Deferred tax has been calculated based on expected realisation, reflecting the reduction in the Danish corporate tax rate (down to 22% in 2016). The effect of the change, DKK 102 million (DKK 119 million in 2014), is included in total deferred income tax.



## 7 INTANGIBLE ASSETS

DKK million	2015	2014
Cost at the beginning of the year	2,205	2,351
Additions during the year	1,158	317
Disposals during the year	–	(463)
Cost at the end of the year	3,363	2,205
Amortisation at the beginning of the year	1,081	1,052
Amortisation during the year	121	98
Impairment losses for the year	243	394
Amortisation and impairment losses reversed on disposals during the year	–	(463)
Amortisation at the end of the year	1,445	1,081
Carrying amount at the end of the year	1,918	1,124

Intangible assets primarily relate to patents and licences, internally developed software, and costs related to major IT projects.

## 8 PROPERTY, PLANT AND EQUIPMENT

DKK million	Land and buildings	Plant and machinery	Other equipment	Payments on account and assets in course of construction	2015	2014
Cost at the beginning of the year	12,351	16,093	2,215	3,912	34,571	32,664
Additions during the year	189	172	115	3,380	3,856	2,547
Disposals during the year	(62)	(258)	(152)	–	(472)	(640)
Transfer from/(to) other items	327	631	125	(1,083)	–	–
Cost at the end of the year	12,805	16,638	2,303	6,209	37,955	34,571
Depreciation and impairment losses at the beginning of the year	5,235	12,119	1,531	–	18,885	17,443
Depreciation for the year	524	951	178	–	1,653	1,847
Impairment losses for the year	–	34	14	–	48	84
Depreciation reversed on disposals during the year	(44)	(233)	(151)	–	(428)	(489)
Depreciation and impairment losses at the end of the year	5,715	12,871	1,572	–	20,158	18,885
Carrying amount at the end of the year	7,090	3,767	731	6,209	17,797	15,686

## 9 STATEMENT OF CHANGES IN EQUITY

DKK million	Share capital	Net revaluation reserve	Retained earnings	2015	2014
Balance at the beginning of the year	530	8,696	31,068	40,294	42,569
Appropriated from Net profit for the year	–	–	21,443	21,443	15,364
Proposed dividends	–	–	16,230	16,230	12,905
Appropriated from Net profit for the year to Net revaluation reserve	–	(3,050)	–	(3,050)	(1,856)
Effect of hedged forecast transactions transferred to the Income statement	–	–	2,162	2,162	(1,201)
Fair value adjustments of cash flow hedges for the year	–	–	(614)	(614)	(2,162)
Dividends paid	–	–	(12,905)	(12,905)	(11,866)
Share-based payments (note 3)	–	–	246	246	172
Tax credit related to share option scheme	–	–	9	9	54
Purchase of treasury shares	–	–	(17,229)	(17,229)	(14,728)
Sale of treasury shares	–	–	33	33	61
Reduction of the B share capital	(10)	–	10	–	–
Exchange rate adjustments of investments in subsidiaries	–	(669)	–	(669)	(35)
Other adjustments	–	–	408	408	1,017
Balance at the end of the year	520	4,977	40,861	46,358	40,294

Please refer to note 4.1 to the Consolidated financial statements regarding average number of shares, treasury shares and total number of A and B shares in Novo Nordisk A/S.

## 10 INVESTMENT IN ASSOCIATED COMPANY

On divestment of 74.5% of the shares in NNIT A/S on 6 March 2015, the remaining interest became an associated company of Novo Nordisk A/S. Net gain on the divestment is determined as the difference between the sales proceeds and the carrying amount of net assets. The remaining interest is measured at the carrying amount of net assets at the date when control is lost with no revaluation to fair value. The investment is adjusted by Novo Nordisk's share of results after tax of the associated company.



## 11 FINANCIAL ASSETS

DKK million	Investments in subsidiaries	Amounts owed by affiliates	Investment in associated company	Other securities and investments	2015	2014
Cost at the beginning of the year	8,736	1,139		482	10,357	9,603
Investments during the year	44	1,116	153	41	1,354	1,139
Divestments during the year	(1)	(788)		(156)	(945)	(385)
Cost at the end of the year	8,779	1,467	153	367	10,766	10,357
Value adjustments at the beginning of the year	28,641	4		(118)	28,527	26,000
Profit/(loss) before tax	20,719				20,719	17,077
Share of result after tax in associated companies			47		47	—
Income taxes on profit for the year	(3,882)				(3,882)	(3,339)
Amortisation and impairment					—	(3)
Market value adjustment				351	351	—
Dividends received	(17,408)				(17,408)	(11,154)
Divestments during the year	(595)			123	(472)	(551)
Effect of exchange rate adjustment	81	(110)		17	(12)	832
Other adjustments	153				153	(335)
Value adjustments at the end of the year	27,709	(106)	47	373	28,023	28,527
Unrealised internal profit at the beginning of the year	(19,945)				(19,945)	(15,755)
Change for the year – charged to Income statement	(2,037)				(2,037)	(2,775)
Change for the year – charged to Equity					—	(706)
Effect of exchange rate adjustment	(750)				(750)	(709)
Unrealised internal profit at the end of the year	(22,732)	—	—	—	(22,732)	(19,945)
Carrying amount at the end of the year	13,756	1,361	200	740	16,057	18,939

Carrying amount of investments in subsidiaries does not include capitalised goodwill at the end of the year. A list of companies in the Novo Nordisk Group is found in note 5.6 to the Consolidated financial statements.

## 12 OTHER PROVISIONS

DKK million	2015	2014
Non-current	717	565
Current	277	332
Total other provisions	994	897

Provisions for pending litigations are recognised as Other provisions. Furthermore, as part of normal business Novo Nordisk issues credit notes for expired goods. Consequently, a provision for future returns is made, based on historical product return statistics.

For information on pending litigations, please refer to note 3.6 to the Consolidated financial statements.

## 13 RELATED PARTY TRANSACTIONS

For information on transactions with related parties, please refer to note 5.4 to the Consolidated financial statements.

## 14 FEE TO STATUTORY AUDITORS

DKK million	2015	2014
Statutory audit	8	7
Audit-related services	2	6
Tax advisory services	3	4
Other services	2	3
Total fee to statutory auditors	15	20

## 15 COMMITMENTS AND CONTINGENCIES

DKK million	2015	2014
<b>Commitments</b>		
Lease commitments	1,255	1,525
Contractual obligations relating to investments in property, plant and equipment	893	244
Guarantees given for subsidiaries	6,418	4,529
Obligations relating to research and development projects	2,457	3,691
Other guarantees and commitments	4,523	3,879
<b>Lease commitments expiring within the following periods from the balance sheet date</b>		
Within one year	209	217
Between one and five years	642	681
After five years	404	627
Total lease commitments	1,255	1,525
The lease costs for 2015 and 2014 were DKK 293 million and DKK 285 million respectively.		
<b>Security for debt</b>		
Land, buildings and equipment etc. at carrying amount	74	80

Novo Nordisk A/S and its Danish subsidiaries are jointly taxed with the Danish companies in the Novo A/S Group. The joint taxation also covers withholding taxes in the form of dividend tax, royalty tax and interest tax. The Danish companies are jointly and individually liable for the joint taxation. Any subsequent adjustments to income taxes and withholding taxes may lead to a larger liability. The tax for the individual companies is allocated in full on the basis of the expected taxable income.

For information on pending litigation and other contingencies, please refer to notes 3.6 and 5.3 to the Consolidated financial statements.



## STATEMENT BY THE BOARD OF DIRECTORS AND EXECUTIVE MANAGEMENT ON THE ANNUAL REPORT

Today, the Board of Directors and Executive Management approved the Annual Report of Novo Nordisk A/S for the year 2015.

The Consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IASB), and International Financial Reporting Standards as endorsed by the EU. The Financial statements of the parent company, Novo Nordisk A/S, have been prepared in accordance with the Danish Financial Statements Act.

Further, the Consolidated financial statements, the Financial statements of the parent company and Management's Review have been prepared in accordance with additional Danish disclosure requirements for listed companies.

In our opinion, the Consolidated financial statements and the Financial statements of the parent company give a true and fair view of the

financial position at 31 December 2015, the results of the Group's and parent company's operations, and consolidated cash flows for the financial year 2015. Furthermore, in our opinion, Management's Review includes a true and fair account of the development in the operations and financial circumstances, of the results for the year, and of the financial position of the Group and the parent company as well as a description of the most significant risks and elements of uncertainty facing the Group and the parent company.

Novo Nordisk's Consolidated social and environmental statements have been prepared in accordance with the reporting principles of materiality, inclusivity and responsiveness of AA1000APS(2008). They give a balanced and reasonable presentation of the organisation's social and environmental performance.

We recommend that the Annual Report be adopted at the Annual General Meeting.

Bagsværd, 2 February 2016

### Executive Management



Lars Rebien Sørensen  
President and CEO



Jesper Brandgaard  
CFO



Lars Fruergaard Jørgensen



Jakob Riis



Mads Krogsgaard Thomsen

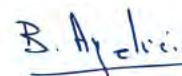
### Board of Directors



Göran Ando  
Chairman



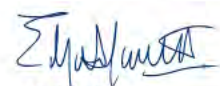
Jeppe Christiansen  
Vice chairman



Bruno Angelici



Sylvie Grégoire




Liz Hewitt



Liselotte Hyvele



Thomas Paul Koestler



Eivind Kolding



Anne Marie Kverneland



Søren Thuesen Pedersen



Stig Strøbæk



Mary Szela



## INDEPENDENT AUDITOR'S REPORTS

### To the Shareholders of Novo Nordisk A/S

#### REPORT ON CONSOLIDATED FINANCIAL STATEMENTS AND FINANCIAL STATEMENTS OF THE PARENT COMPANY

We have audited the Consolidated financial statements and the Financial statements of Novo Nordisk A/S for the financial year 2015, pp 55–94 and pp 105–108, which comprise Income Statement, Balance Sheet, Statement of Changes in Equity and Notes including accounting policies for the Group as well as for the Parent Company and Statement of Comprehensive Income and Cash Flow Statement for the Group.

The Consolidated financial statements are prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and International Financial Reporting Standards as endorsed by the EU. The Financial statements of the Parent Company are prepared in accordance with the Danish Financial Statements Act. Moreover, both the Consolidated financial statements and the Financial statements of the Parent Company are prepared in accordance with additional Danish disclosure requirements for listed companies.

#### Management's Responsibility for the Consolidated financial statements and the Financial statements of the Parent Company

The Management is responsible for the preparation of the Consolidated financial statements and the Financial statements of the Parent Company that give a true and fair view in accordance with the above legislation and accounting standards, and for such internal control as Management determines is necessary to enable preparation of Consolidated financial statements and Financial statements of the Parent Company that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on the Consolidated financial statements and the Financial statements of the Parent Company based on our audit. We conducted our audit in accordance with International standards on Auditing and additional requirements under Danish Audit regulation. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Consolidated financial statements and the Financial statements of the Parent Company are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Consolidated financial statements and the Financial statements of the Parent Company. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Consolidated financial statements and the Financial statements of the Parent Company, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation of Consolidated financial statements and Financial statements of the Parent Company that give a true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Management, as well as evaluating the overall presentation of the Consolidated financial statements and the Financial statements of the Parent Company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Our audit has not resulted in any qualification.

#### Opinion

In our opinion, the Consolidated financial statements give a true and fair view of the financial position at 31 December 2015 of the Group and of the results of the Group's operations and consolidated cash flows for the financial year 2015 in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and International Financial Reporting Standards as endorsed by the EU and additional Danish disclosure requirements for listed companies. Moreover, in our opinion the Financial statements of the Parent Company give a true and fair view of the financial position at 31 December 2015 and of the results of the Parent Company's operations for the financial year 2015 in accordance with the Danish Financial Statements Act and additional Danish disclosure requirements for listed companies.

#### STATEMENT ON MANAGEMENT'S REVIEW

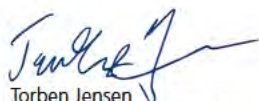
We have read Management's Review, pp 1–54 and p 95 in accordance with the Danish Financial Statements Act.

On this basis, it is our opinion that the information provided in the Management's Review is consistent with the Consolidated financial statements and the Financial statements of the Parent Company.

Bagsværd, 2 February 2016

PricewaterhouseCoopers

Statsautoriseret Revisionspartnerselskab (CVR no 3377 1231)



Torben Jensen  
State Authorised Public Accountant



# INDEPENDENT LIMITED ASSURANCE REPORT ON THE SOCIAL AND ENVIRONMENTAL REPORTING FOR 2015

## To the Stakeholders of Novo Nordisk A/S

We have undertaken a limited assurance engagement of the consolidated social and environmental information of the Annual Report (the report) of Novo Nordisk A/S for 2015 which comprises Management's Review and the Consolidated social and environmental statements on pp 1–54 and 96–104. The assurance engagement has also covered the nature and extent of Novo Nordisk's adherence to the AA1000 Accountability Principles Standard (AA1000APS (2008)) principles (inclusivity, materiality and responsiveness) with respect to stakeholder dialogue.

## Novo Nordisk's responsibility for the consolidated social and environmental information

Novo Nordisk's management is responsible for adherence to the AA1000AS (2008) Standard, preparation of the consolidated social and environmental information (the information) in accordance with the accounting policies described on pages 97–104 and the Novo Nordisk approach towards adherence to AA1000APS (2008). This responsibility includes design, implementation and maintenance of internal controls to ensure that data are free from material misstatement, whether due to fraud or error.

## Our independence and quality control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other ethical requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. We also qualify as independent as defined by the AA1000 Assurance Standard (AA1000AS(2008)). The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. Our work was carried out by an independent multidisciplinary team with experience in sustainability reporting and assurance.

## Our responsibility

Our responsibility is to express a limited assurance conclusion on the information in the report based on the procedures we have performed and the evidence we have obtained. Furthermore, our responsibility is, by applying the AA1000AS (2008), to express a moderate assurance conclusion and make recommendations for the nature and extent of Novo Nordisk's adherence to the AA1000APS (2008) principles.

We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000, 'Assurance Engagements other than Audits or Reviews of Historical Financial Information', issued by the International Auditing and Assurance Standards Board. ISA 3000 requires that we plan and perform the engagement to obtain limited assurance about whether the information are free from material misstatement.

A limited assurance engagement undertaken in accordance with ISA 3000 involves assessing the suitability of Novo Nordisk's use of stated accounting policies as the basis for the preparation of the information. Furthermore, it involves assessing the risks of material misstatement of the information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Moreover, we have planned our work based on the AA1000AS (2008) to perform a Type 2 engagement and to obtain moderate assurance regarding the nature and extent of Novo Nordisk's adherence to the principles of inclusivity, materiality and responsiveness.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether Novo Nordisk's consolidated social and environmental information have been prepared, in all material respects, in accordance with the social and environmental accounting policies as stated on pages 97–104.

Furthermore, nothing has come to our attention causing us to believe that Novo Nordisk does not adhere to the AA1000APS (2008) principles.

## Observations and recommendations

According to AA1000AS (2008), we are required to include observations and recommendations for improvements in relation to adherence to the AA1000APS (2008) principles. We have no significant recommendations regarding inclusivity, materiality and responsiveness.

## Regarding inclusivity

Novo Nordisk continues to demonstrate a strong commitment to accountability with systems and processes in place to support stakeholder engagement around sustainability issues at corporate and affiliate levels. Stakeholder inclusivity is integrated across the business and in new initiatives. In 2015, Novo Nordisk has been highly engaged in the rollout of the Cities Changing Diabetes initiative which has included a formalised approach to stakeholder engagement and input.

## Regarding materiality

Novo Nordisk continues to discuss, evaluate and determine the materiality of sustainability issues on an ongoing basis through a number of relevant governance bodies and core business processes, involving senior management input from across the business. The Social and Environmental Committee with a direct responsibility for Executive Management further strengthens the Triple Bottom Line management within the business.

## Regarding responsiveness

Novo Nordisk's commitment to being responsive to stakeholder needs and concerns is evident from Senior Management's increasing engagement in dialogue, at both international and country level, on care and prevention of diabetes and other chronic diseases. In 2015, a stronger focus has been introduced in the Changing Diabetes program to better respond to patients' needs and to further increase Novo Nordisk's impact on 'the rule of halves'.

Bagvær, 2 February 2016

PricewaterhouseCoopers

Statautoriseret Revisionspartnerselskab (CVR no 3377 1231)

Torben Jensen  
State Authorised Public Accountant



# PRODUCT OVERVIEW



A selection of  
Novo Nordisk injection devices.

## DIABETES CARE

### NEW-GENERATION INSULINS

- Tresiba®, insulin degludec
- Ryzodeg®, insulin degludec/insulin aspart
- Xultophy®, insulin degludec/liraglutide

### GLUCAGON-LIKE PEPTIDE-1

- Victoza®, liraglutide

### MODERN INSULINS

- Levemir®, insulin detemir
- NovoRapid®, insulin aspart
- NovoRapid® PumpCart®, pre-filled insulin pump cartridge
- NovoMix® 30, biphasic insulin aspart
- NovoMix® 50, biphasic insulin aspart
- NovoMix® 70, biphasic insulin aspart

### HUMAN INSULINS

- Insulatard®, isophane (NPH) insulin
- Actrapid®, regular human insulin
- Mixtard® 30, biphasic human insulin
- Mixtard® 40, biphasic human insulin
- Mixtard® 50, biphasic human insulin

### DIABETES DEVICES

Pre-filled insulin delivery systems

- FlexTouch®, U100, U200
- FlexPen®
- InnoLet®

### OTHER INSULIN DELIVERY SYSTEMS

- PumpCart®, NovoRapid® cartridge to be used in pump
- Cartridge
- Vial

### INSULIN PENS

- NovoPen® 5
- NovoPen® 4
- NovoPen® 3
- NovoPen Echo®, with memory function

### NEEDLES

- NovoFine® Plus
- NovoFine®
- NovoTwist®
- NovoFine® AutoCover

### ORAL ANTIDIABETIC AGENTS

- NovoNorm®, repaglinide

### GLUCAGON

- GlucaGen®, glucagon for diagnostic use
- GlucaGen® Hypokit, glucagon emergency kit for severe hypoglycaemia

## OBESITY

- Saxenda®, GLP-1 analogue for weight management

## BIOPHARMACEUTICALS

### HAEMOSTASIS

- NovoSeven®, recombinant factor VIIa, also available with pre-filled syringe in an increasing number of countries
- NovoThirteen®, recombinant factor XIII
- NovoEight®, recombinant factor VIII

### HUMAN GROWTH HORMONE

- Norditropin®, somatropin (rDNA origin)
- Norditropin® FlexPro®, pre-filled multi-dose delivery system
- Norditropin® NordiFlex®, pre-filled multi-dose delivery system
- Norditropin® NordiLet®, pre-filled multi-dose delivery system
- Norditropin® SimpleXx®, durable multi-dose delivery system
- NordiPen®
- PenMate®, automatic needle inserter, (for NordiPen® and NordiFlex®)

### HORMONE REPLACEMENT THERAPY

- Vagifem®, estradiol hemihydrate
- Activelle®, estradiol/norethisterone acetate
- Kliogest®, estradiol/norethisterone acetate
- Novofem®, estradiol/norethisterone acetate
- Trisequens®, estradiol/norethisterone acetate
- Estrofem®, estradiol



# MORE INFORMATION AND REFERENCES

## FINANCIAL CALENDAR 2016

DIVIDEND					ANNOUNCEMENT OF FINANCIAL RESULTS			
<b>18</b> MARCH 2016	<b>21</b> MARCH 2016	<b>22</b> MARCH 2016	<b>23</b> MARCH 2016	<b>30</b> MARCH 2016	<b>29</b> APRIL 2016	<b>05</b> AUGUST 2016	<b>28</b> OCTOBER 2016	<b>02</b> FEBRUARY 2017
Annual general meeting	Ex-dividend	Record date	Payment, B shares	Payment, ADRs	First three months	Half year	First nine months	Full year

## NEWS AND UPDATES

### FOR MORE NEWS FROM NOVO NORDISK, VISIT

[novonordisk.com/investors](http://novonordisk.com/investors)  
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[novonordisk.com/sustainability](http://novonordisk.com/sustainability)

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## ADDITIONAL REPORTING

In addition to the Annual Report, Novo Nordisk provides disclosure in separate reports to satisfy specific legal requirements and stakeholder interests. Additional reports can be downloaded from [novonordisk.com/annualreport](http://novonordisk.com/annualreport).

### FORM 20-F

Annual reporting requirement by the US Securities and Exchange Commission (SEC) for foreign private issuers with equity shares listed on exchanges in the United States. Form 20-F is filed using a standardised reporting form so that investors can evaluate the company alongside US domestic equities.

### CORPORATE GOVERNANCE REPORT

Requirement according to the Danish Financial Statements Act. Reporting of compliance with Danish Corporate Governance Recommendations.

### UNITED NATIONS GLOBAL COMPACT

Voluntary Communication on Progress reporting in the form of the United Nations and its 10 principles in the areas of human rights, labour rights, environment and anti-corruption. As a LEAD member, Novo Nordisk provides additional progress reporting on corporate sustainability leadership and UN goals. This reporting also fulfils the requirements of the Danish Financial Statements Act, sections 99a and 99b, on policies and actions for corporate responsibility and progress against targets for diversity in management.

**Design and production:** ADTomic Communications. **Accounts and notes:** Team2Graphics. **Printing:** Bording PRO as, February 2016. **Photography:** Rasmus Daniel Taun, Jesper Westley Jørgensen, Ulrik Jantzen, Ludmilla Aud Timsdottir, Martin Juul, Anders Bøggild, Jesper Edvardsen, Søren Svendsen, Jens Lindhe.

**References:** 1. International Diabetes Federation. *IDF Diabetes Atlas, 7th edn*. Brussels, Belgium: International Diabetes Federation 2015. 2. World Health Organization: Obesity and overweight. Fact sheet N° 311. World Health Organization, January 2015. 3. World Federation of Hemophilia. About Bleeding Disorders, Hemophilia. World Federation of Hemophilia, May 2012. 4. Efpia, European Federation of Pharmaceutical Industries and Associations. <http://www.efpia.eu/diseases/68/59/Growth-Problems>. 5. EvaluatePharma, January 2016. Data on file. 6. UK Prospective Diabetes Study (UKPDS) Group. UK prospective diabetes study VIII. Study design, progress and performance. *Diabetologia* 1991; 34:877–890. 7. Hart JT. Rule of Halves: implications of increasing diagnosis and reducing dropout for future workload and prescribing costs in primary care. *Br J Gen Pract* 1992; 42(356):116–119 and Smith WCS, Lee AJ, Crombie IK & Tunstall-Pedoe H. Control of blood pressure in Scotland: the rule of halves. *BMJ* 1990; 300:981–983. 8. International Diabetes Federation. [idf.org/about-diabetes/risk-factors](http://idf.org/about-diabetes/risk-factors) 9. Gray A, et al: Cost effectiveness of an intensive blood glucose control policy in patients with type 2 diabetes: economic analysis alongside randomised controlled trial (UKPDS 41). *BMJ* 2000; 320:1373–8. 10. Li R, et al: Cost-effectiveness of interventions to prevent and control diabetes mellitus: a systematic review. *Diabetes Care* 2010; 33:1872–94. 11. Gray A, Raikou M, McGuire A, et al. Cost-effectiveness of an intensive blood glucose control policy in patients with type 2 diabetes: economic analysis alongside randomised controlled trial (UKPDS 41). *BMJ* 2000; 320:1373–8. 12. Novo Nordisk A/S. Economic simulations based on the CORE diabetes model 2011. 13. American Diabetes Association. Approaches to Glycemic Treatment. *Diabetes Care* 2015; 38(Supplement 1):S41–S48. 14. McCullough AJ. Epidemiology of the metabolic syndrome in the USA. *Journal of Digestive Diseases* 2011; 12:333–340. 15. Ogden CL, Carroll MD, Kit BK & Flegal KM. Prevalence of Childhood and Adult Obesity in the United States 2011–2012. *The Journal of the American Medical Association* 2014; 311(8):806–814. 16. United Nations Department of Economic and Social Affairs. *World Urbanization Prospects, The 2014 Revision, Highlights* 2014. 17. Stonebraker JS, Bolton-Maggs PHB, Soucie JM, Walker I & Brooker M. A study of variations in the reported haemophilia A prevalence around the world. *Haemophilia* 2010; 16:20–32. 18. Stonebraker JS, Bolton-Maggs PHB, Michael Soucie JM, Walker I & Brooker M. A study of variations in the reported haemophilia B prevalence around the world. *Haemophilia* 2012; 18(3):e91–4.

Market data on pp 16, 17, 36 and 37 are from IMS Health 2015. Market data on p 35 are from IMS Health – Market Prognosis Global, January 20 2016 (data on file for list of countries included in regions).



## Headquarters

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Novo Allé  
2880 Bagsværd  
Denmark  
Tel +45 4444 8888  
CVR number 24 25 67 90  
[novonordisk.com](http://novonordisk.com)

## Investor Service

Enquiries and feedback on the Annual Report should be addressed to:  
[annualreport@novonordisk.com](mailto:annualreport@novonordisk.com)

Shareholders' enquiries concerning dividend payments and shareholder accounts should be addressed to:  
[shareholder@novonordisk.com](mailto:shareholder@novonordisk.com)

Aerial view of Shanghai, China. More than 23 million people live in Shanghai, which is one of the partner cities in the Cities Changing Diabetes programme. It is estimated that 8.3% of the city's population has type 2 diabetes. If action is not taken, this number is projected to grow to 15.5% by 2040. Read more about Cities Changing Diabetes on [page 30](#).

ADR holders' enquiries concerning dividend payments, transfer of ADR certificates, consolidation of accounts and tracking of ADRs should be addressed to:

JP Morgan Chase Bank, N.A.  
PO Box 64504  
4 New York Plaza, Floor 12  
New York, NY 1004  
Attention: Depositary Receipts Group  
Tel +1 800 990 1135  
Tel +1 651 453 2128  
(From outside the United States)  
[jpmorgan.adr@wellsfargo.com](mailto:jpmorgan.adr@wellsfargo.com)

